RICOH

RICOH FT2050/2010

FIELD SERVICE MANUAL

RICOH COMPANY LTD.

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CAUTIONS

1. Before installing the machine, make sure that there is a suitable ground (earth) available.
2. Since some parts of the copier are supplied with high voltage, make sure the main switch is off and the power supply cord is unpluged before working on the copier.
3. When working on the fusing section, make sure that the fusing unit is cold.
4. When standing the clamshell straight up, place a block that has a height of approximately 80 mm (approx. 3") in front of the exit cover.
5. Do not turn on the safety switch when the clamshell is open.

SECTION 1

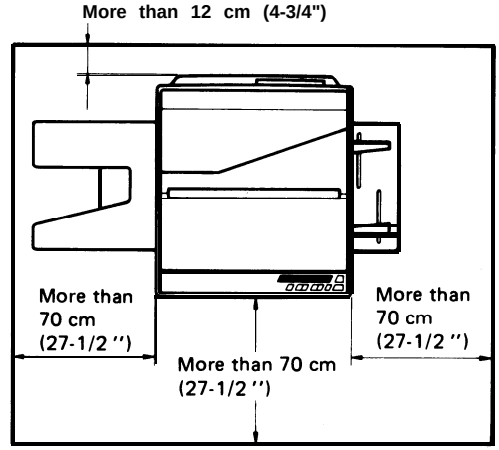
INSTALLATION REQUIREMENTS

1-1. Environment

1. **Temperature Range : 10°C to 30°C (50°F to 86°F)**
2. **Humidity Range : 15% to 90% RR**
3. **Ambient Illumination : Less than 1,500 luxs (Do not expose to direct sunlight)**
4. **Ventilation : Room air should turn over at least 3 times/hour.**
5. **Ambient Dust : Less than 0.1 5mg/m^3 (4×10^{-3} oz/yd^3)**
6. **Room Size : More than 10m^3 (13.4 yd^3)**
7. **If the installation place is air-conditioned or heated, place the machine:**
   a. **Where it will not be subjected to sudden temperature changes from low to high, or vice versa.**
   b. **Where it will not be directly exposed to cool air from an air conditioner in the summer.**
   c. **Where it will not be directly exposed to reflected heat from a space heater in winter.**
8. **Avoid placing the copier in an area filled with corrosive gas.**
9. **Avoid any area higher than 2,000m (6,500 feet) above sea level.**
10. **Place the copier on a strong and level base.**
11. **Avoid any area where the copier may be subjected to frequent strong vibration.**

1-2. Minimum Space Requirements

1. Front :70 cm (27-1/2")
2. Back :12 cm (4-3/4")
3. Right :70 cm (27-1/2")
4. Left :70 cm (27-1 /2")



1-3. Power Source

1. Input voltage level
   - 110V/60Hz : More than 12A
   - 115V/60Hz : More than 12A
   - 220V/50Hz : More than 6A
   - 240V/50Hz : More than 6A
2. Permissible voltage fluctuation: ±10%
3. Permissible extension cord:
   At least 300V, 30A capacity and less than 5m (16.4") long.

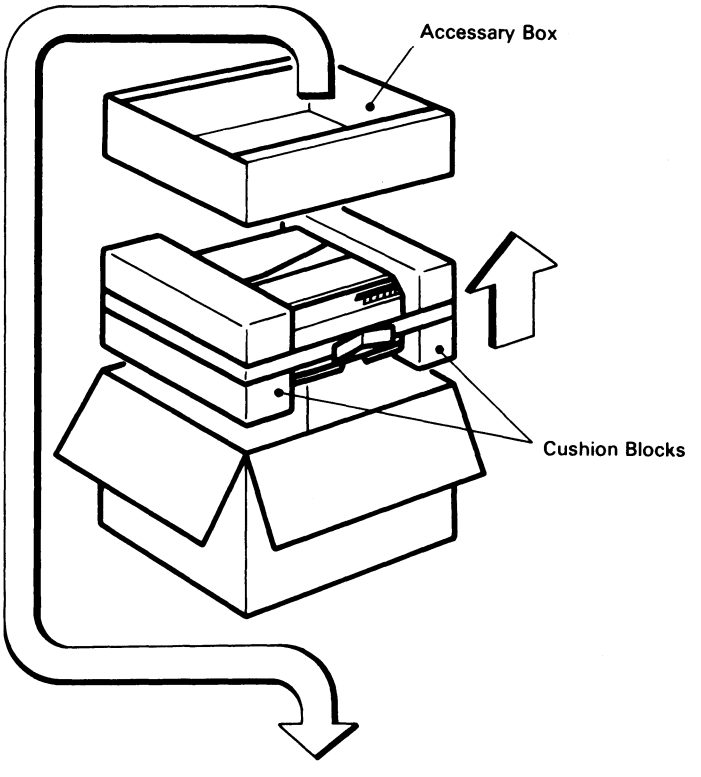
Note:
1. Be sure to ground the machine. (Do not connect the grounding wire to a gas pipe.
2. Make sure the plug is firmly inserted in the outlet.
3. Avoid multi-wiring.
4. Do not set anything on the power cord.

SECTION 2

UNPACKING AND INSTALLATION

2-1. Unpacking Procedure

1. Take out the accessory box and the machine.
2. Remove the two cushion blocks.
3. Open the vinyl bag and take out the machine.



4. Check that the accessories are in the quantities according to the following list.

① Cassette . . . . . 2 pcs.
(One is in the machine.)

② Cassette Cover . . . .1 pc

③ Copy Tray . . . . . 1 pc

④ Manual Feed Guide . . . . . 1 pc

⑤ Master Unit . . . . . 1 pc

NOTE: Keep it in the box until installing it in the copier.

⑥ Toner . . . . . 1 cartridge (Black)

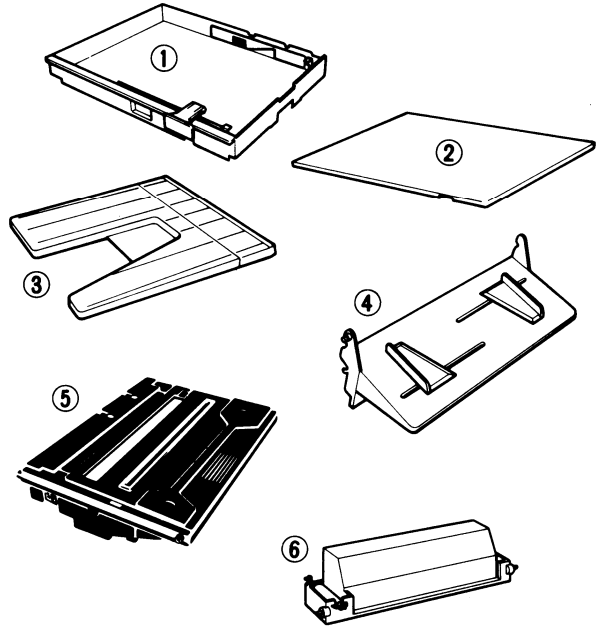
⑦ Operating instructions . . . . . 1 pc

⑧ N.E.C.R . . . . . 1 pc

⑨ Envelope for N.E.C.R. (115Vonly) . . . . . 1 pc

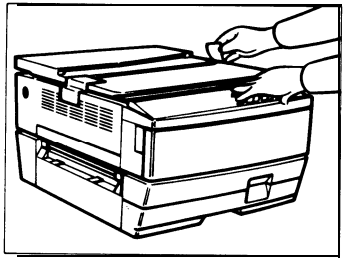
⑩ Multi-lingualDecal(220/240Vonly) . . . . . 1 pc

⑪ Paper Size Decal . . . . . 1 pc

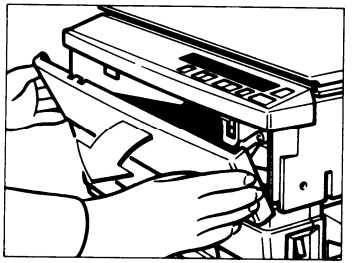


2-2. Installation Procedure

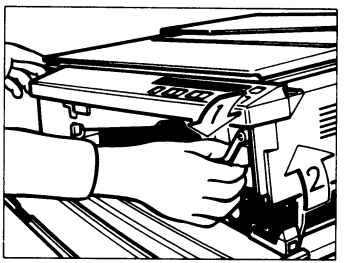
1. **Remove the two strips of tape.**



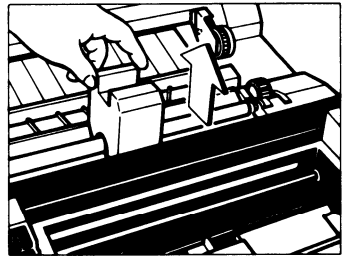
2. **Open the front cover.**



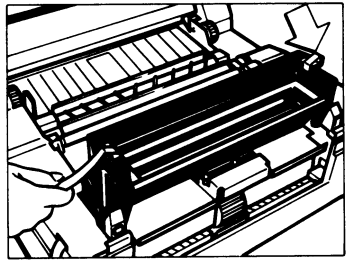
3. **Move the slider to the center and push down the release lever to open the top unit.**



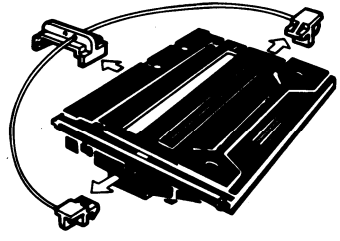
4. Remove the roller retainer.



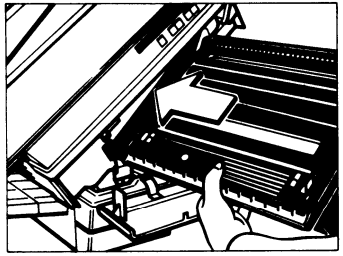
5. Remove the two strips of tape.



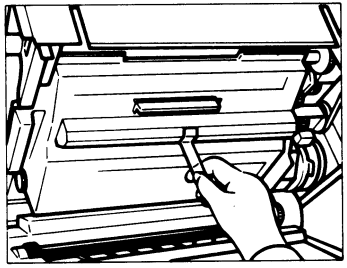
6. Remove the three wedges from the new master unit.
   Note: Do not touch the master (purple material) and avoid exposing it to light.



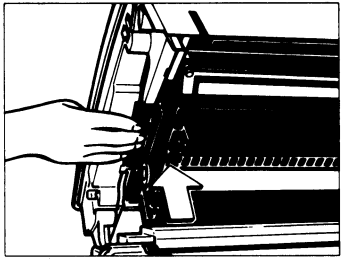
7. Insert the master unit into the copier.



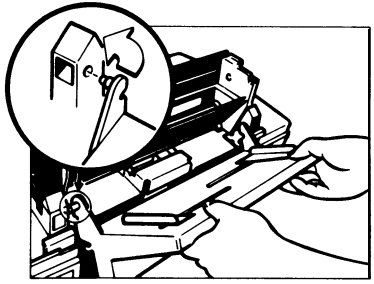
8. Peel off the polyester cover that protects the master.



9. Push the master unit up until it locks in place.

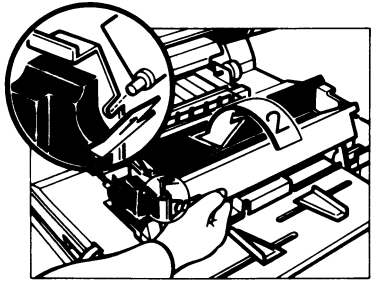


10. Install the manual feed guide on the right side of the machine.

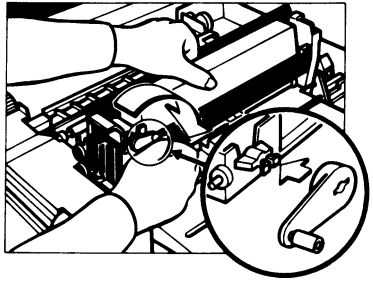


11. Shake the new cartridge of toner well.

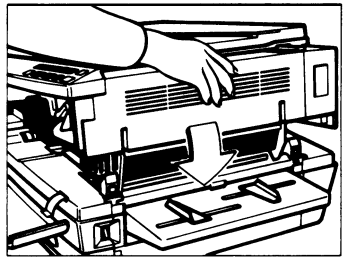
12. Set the pins of the toner cartridge into the slots on the development unit. Then, turn the cartridge counterclockwise.



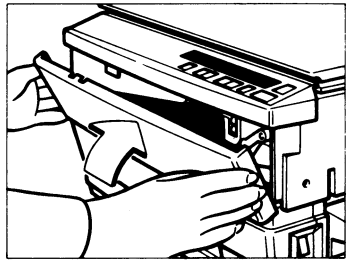
13. Install the cartridge crank onto the shaft and turn the cartridge crank clockwise to strip off the cartridge seal.
    Then, remove the cartridge crank and lower the top unit.
    Note: At installation, it is recommended to load two cartridges of toner.



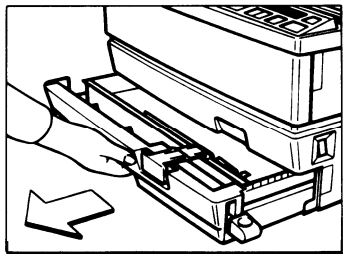
14. Lower the top unit.



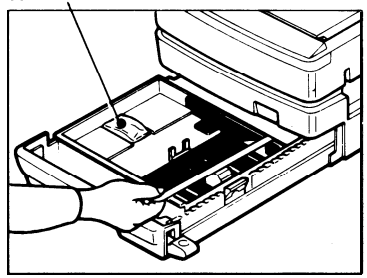
15. Close the front cover.



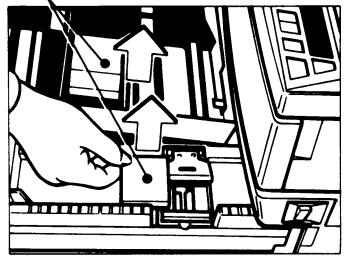
16. Pull out the cassette tray unit it stops



17. Remove the strip of tape and the silica gel.

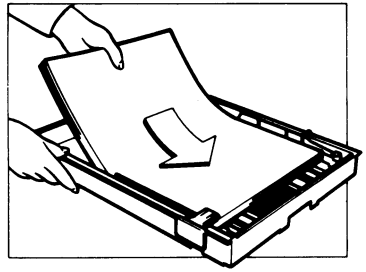


18. Take out the cassette and the two cushion blocks.

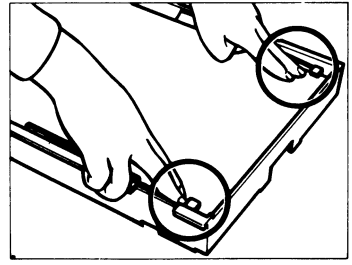


19. Load paper into the cassette so that it is flush with the front and side fences.

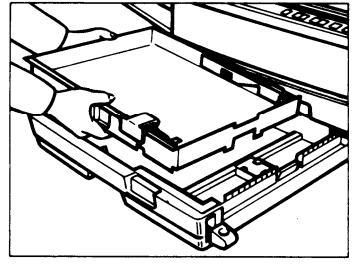
NOTE: The cassette holds approximately 250 sheets.



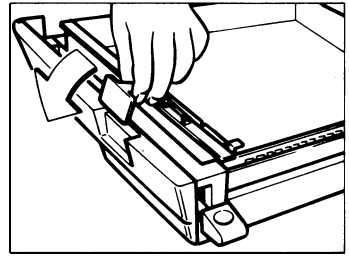
20. **Press down the corners of the paper stack so that they catch underneath the corner separators.**



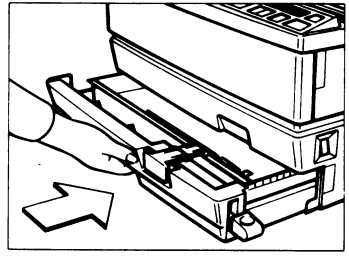
21. **Set the cassette on the cassette tray.**



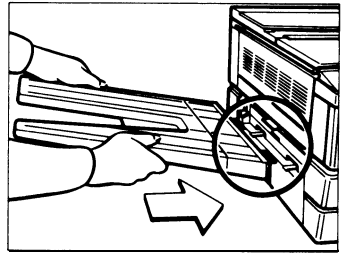
22. **Set the paper size flap.**



23. Push in the cassette tray until it stops.

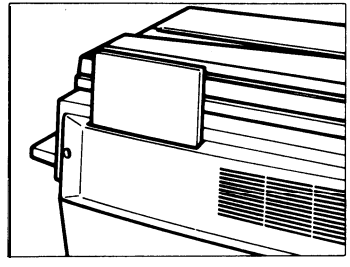


24. Install the copy tray on the left side of the machine.



25. When not using this instruction booklet, place it in the holder on the back of the copier.

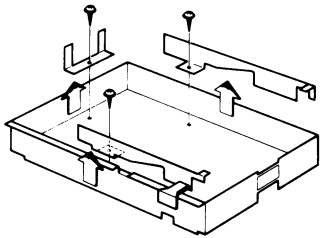
26. Check machine operation and copy quality. Fill out the New Equipment Condition Report.



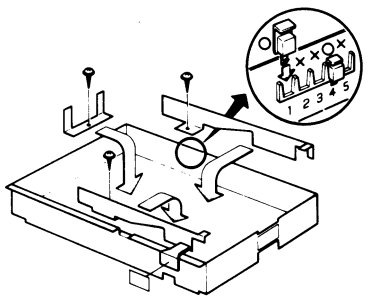
This completes machine installation.

2-3. Cassette Modification

1. **Remove the side fences and the rear fence (1 screw each).**



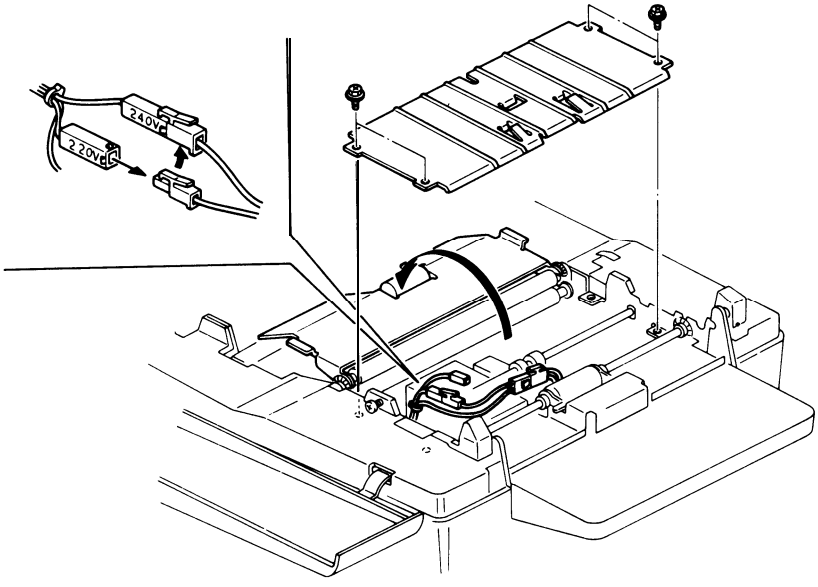
2. **Reposition the fences to the desired paper size position.**
3. **Insert the actuators in the proper slots on the front of the cassette.**
4. **Attach the proper paper size decal on the paper size flap.**



	(mm)	1	2	3	4	5
HLT (5½×8½)	138.7×215.8	○	○	×	×	×
UK (8×10)	203.2×254	×	×	○	×	×
GT (8×10½)	203.2×266.7	○	×	○	×	×
8×13	203.2×330.2	×	○	○	×	×
8¼×13(14)	209.6×330.2(355.6)	○	○	○	×	×
HLT (8½×5½)	215.9×139.7	×	×	×	○	×
LT (8½×11)	215.9×278.4	○	×	×	○	×
8½×13	215.9×330.2	×	○	×	○	×
LG (8½×14)	215.9×355.6	○	○	×	○	×
10×14	254 ×355.6	×	×	○	○	×
10×15	254 ×381	○	×	○	○	×
LT (11×8½)	279.4×215.9	×	○	○	○	×
DLT (11×17)	279.4×431.8	○	○	○	○	×
A6 (P.C.)	105 ×148	×	○	×	×	○
B6	128 ×182	×	×	○	×	○
A5	148 ×210	×	○	○	×	○
A5	210 ×148	○	○	○	×	○
B5	182 ×257	×	×	×	○	○
B5	257 ×182	○	×	×	○	○
A4	210 ×297	×	○	×	○	○
A4	297 ×210	○	○	×	○	○
B4	257 ×364	×	×	○	○	○
A3	297 ×420	×	○	○	○	○
11.8×9.8	300 ×250	○	×	×	×	×
10.8×8.8	276 ×225	×	○	×	×	×
A5	148 ×210	○	○	×	×	○

2-4. Main Transformer Conversion (220 to 240V only)

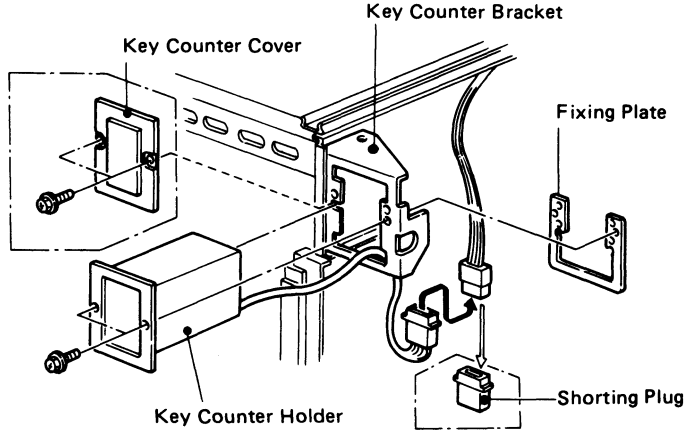
1. Open the top unit and remove the development unit.
2. Swing up the upper feed guide (1 screw).
3. Remove the lower feed guide (4 screw).
4. Uncouple the 220V connector and couple the 240V connector.



2-5. Key Counter Holder Installation

Note: Three types of counters are recommended for this copier (Ricoh, Hecon, and Hengstler key counters).

1. Remove the upper right cover (4 screws.)
2. Remove the key counter cover and fixing plate from the key counter bracket (2 screws).
3. Hold the fixing plate on the inside of the key counter bracket and insert the key holder.

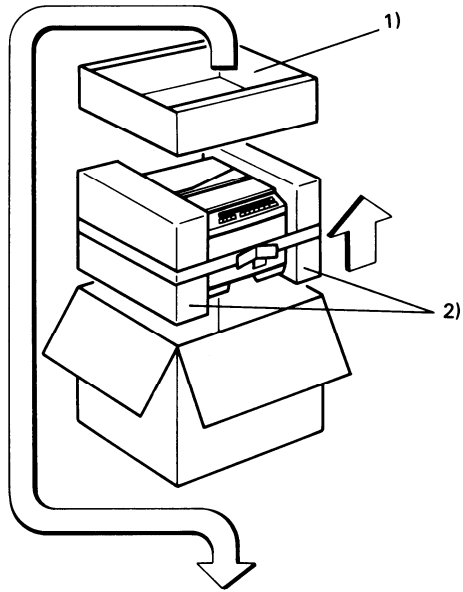


4. **Align the holes in the fixing plate with the mounting holes of the key counter holder and secure the key counter holder.**
   Note: The fixing plate has three sets of holes. Make sure to use the holes that match the type of counter when installing.
5. **Remove the shorting plug from the key counter connector.**
   Note: This shorting plug is usually on the harness.
6. **Plug in the key counter harness.**
7. **Reassemble the copier. Insert the key counter and check its operation.**

2-6. Unpacking Procedure

1. Take out the accessory box and the machine.
2. Remove the two cushion blocks.
3. Open the vinyl bag and take out the machine.

1) Accessory Box
2) Cushion Blocks



4. Check that the accessories are in the quantities according to the following list.

1] Cassette . . . . . 2 pcs.

. . . . . 3 pcs. (Asia)

(One is in the machine.)

2) Cassette Cover . . . . . 1 pc

3) Copy Tray . . . . . 1 pc

4) Paper Tray . . . . . 1 pc

5) Master Unit . . . . . 1 pc

NOTE: Keep it in the box until installing it in the copier.

6) Toner . . . . . 1 cartridge (Black)

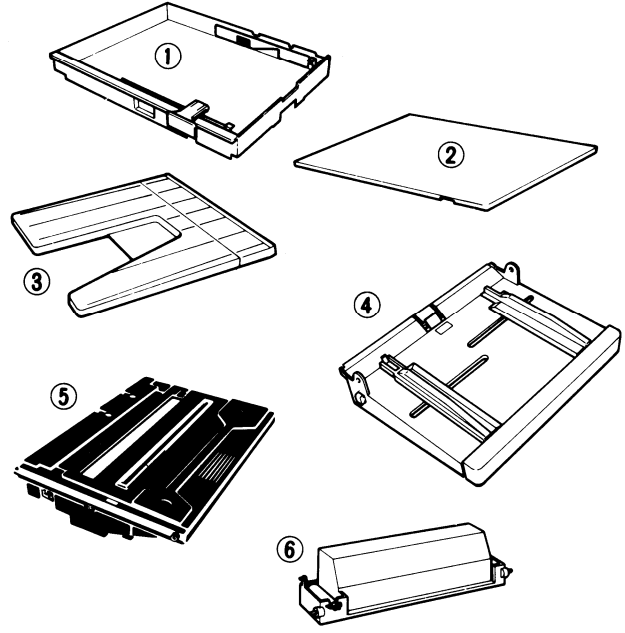
7) Operating Instructions . . . . . 1 pc

8) N.E.C.R . . . . . 1 pc

9) Envelope for N.E.C.R. (USA only) . . . . . 1 pc

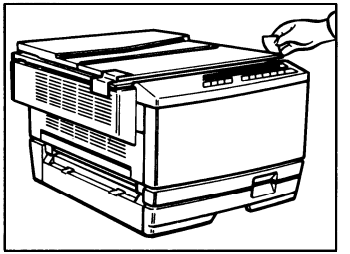
10) Multi-lingualDecal(220/240V only) . . . . . 1 pc

11) Paper Size Decal . . . . . 1 pc



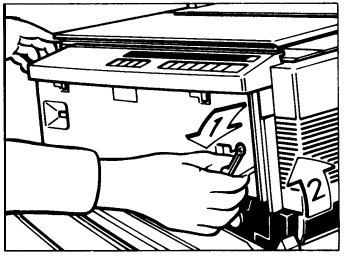
2-7. Installation Procedure

1. **Remove the two strips of tape.**

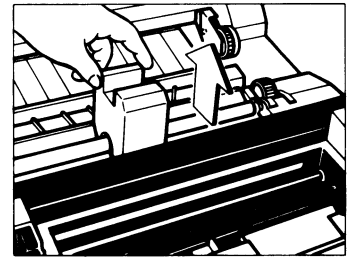


2. **Open the front cover.**

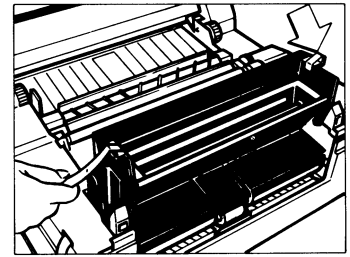
3. **Move the slider to the center and push down the release lever to open the top unit.**



4. Remove the roller retainer.

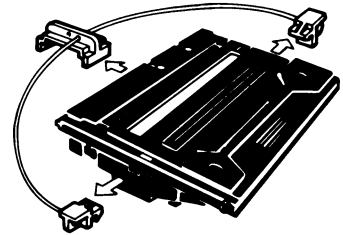


5. Remove the two strips of tape.

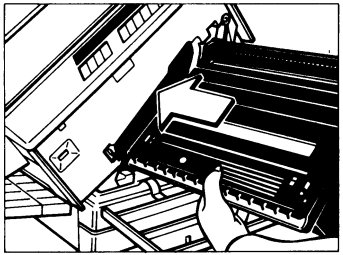


6. Remove the three wedges from the new master unit.

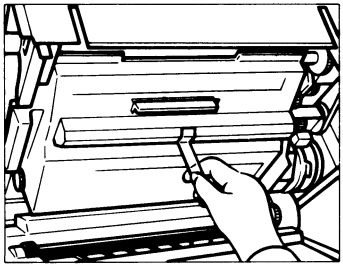
   Note: Do not touch the master (purple material) and avoid exposing it to light.



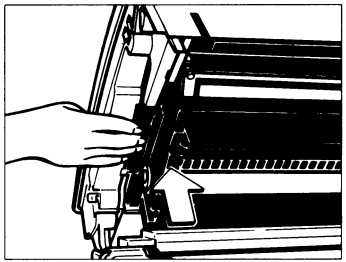
7. Insert the master unit into the copier,



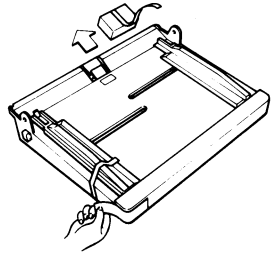
8. Peel off the polyester cover that protects the master.



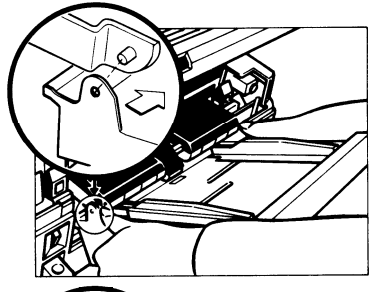
9. Push the master unit up until it locks in place.



10. Remove the two strips of tape and one cushion block from the paper tray.

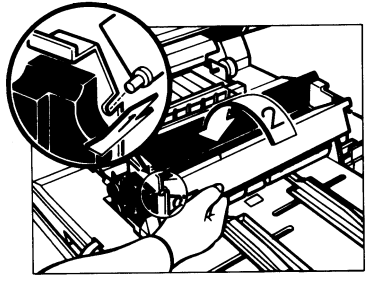


11. Install the paper tray on the right side of the machine.

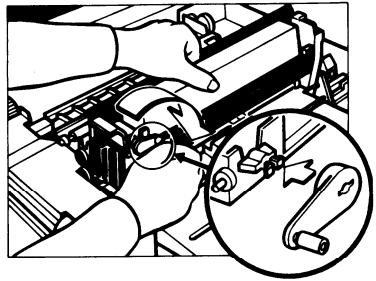


12. Shake the new cartridge of toner well.

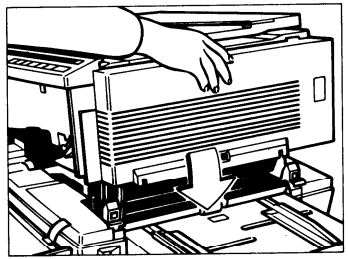
13. Set the pins of the toner cartridge into the slots on the development unit. Then, turn the cartridge counterclockwise



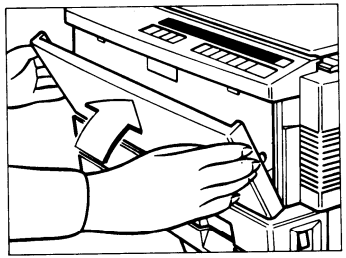
14. Install the cartridge crank onto the shaft and turn the cartridge crank clockwise to strip off the cartridge seal.
    Then, remove the cartridge crank and lower the top unit.
    Note: At installation, it is recommended to load two cartridges of toner.



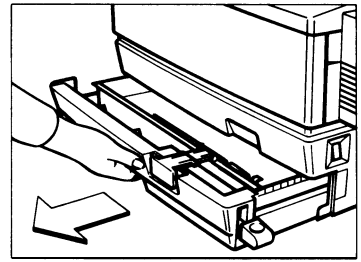
15. Lower the top u-nit.



16. Close the front cover.

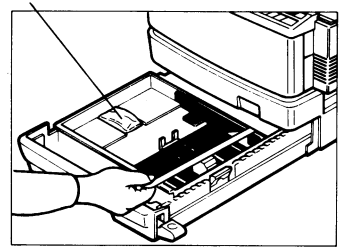


17. Pull out the cassette tray unit it stops.



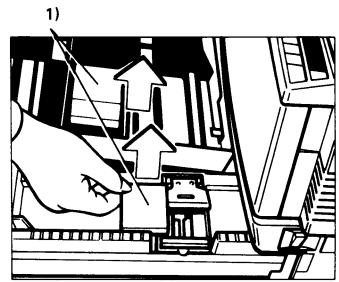
18. Remove the strip of tape and the silica gel.

1) Silica Gel

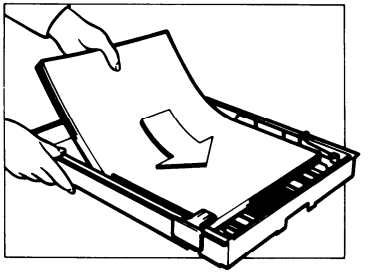


19. Take out the cassette and the two cushion blocks.

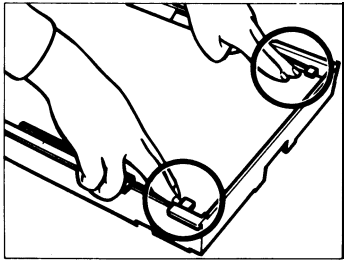
1) Cushion Blocks



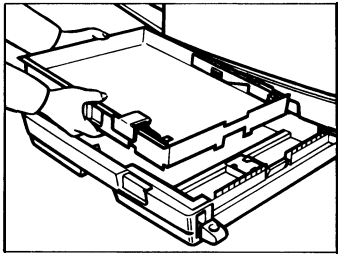
20. Load paper into the cassette so that it is flush with the front and side fences.
    Note: The cassette holds approximately 250 sheets.



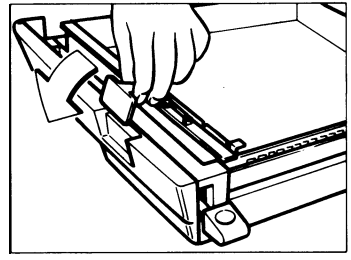
21. Press down the corners of the paper stack so that they catch underneath the corner separators.



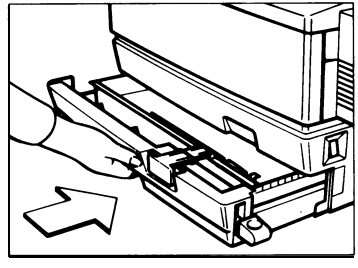
22. Set the cassette on the cassette tray.



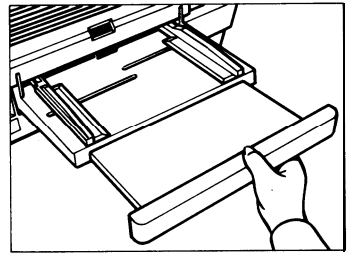
23. Set the paper size flap.



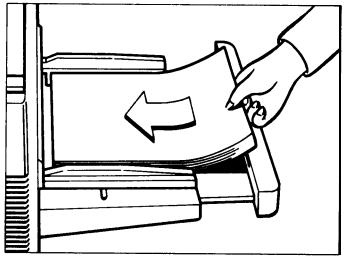
24. Push in the cassette tray until it stops.



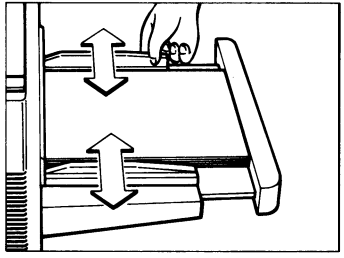
25. Slide the drawer tray to the position of the paper size.



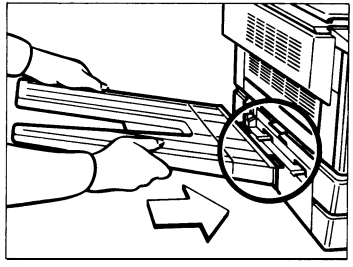
26. Load paper into the paper tray.



27. Adjust the paper guides so that they contact both sides of the stack firmly.



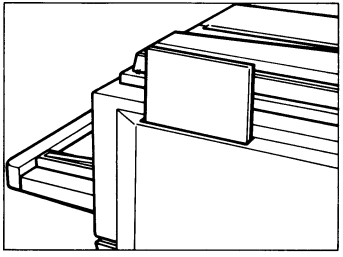
28. Install the copy tray on the left side of the machine.



29. When not using this instruction booklet, place it in the holder on the back of the copier.

30. Check machine operation and copy quality. Fill out the New Equipment Condition Report.

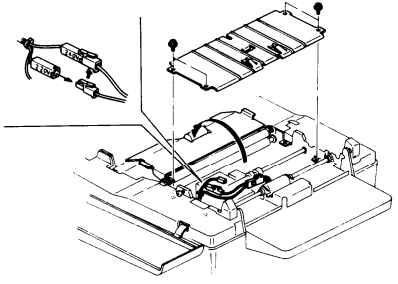
This completes machine installation.

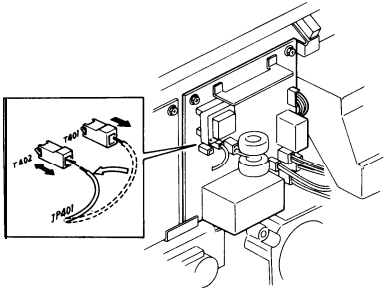


2-8, Main Transformer Conversion (220 to 240V only)

1. Open the top unit and remove the development unit.
2. Swing up the upper feed guide (1 screw).
3. Remove the lower feed guide (4 screw).
4. Uncouple the 220V connector and couple the 240V connector.
5. Remove the upper rear cover (2 screws).
6. Shift the jumper wire (JP401) on the AC drive board from T401 to T402.

Note: Slide the terminal lock up to release the jumper wire and slide it down to secure the wire in position.





SECTION 3

PREPARATIONS FOR TRANSPORTING THE COPIER

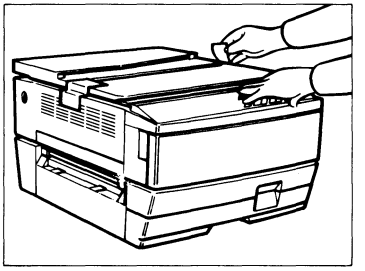
Before moving the copier from its place of installation, be sure to prepare it for transportation as follows. The copier may be badly damaged if it is moved without proper preparation.

Note: * If the copier is installed with the DF or sorter, remove them first.
(See the DF or Sorter Installation procedure.)

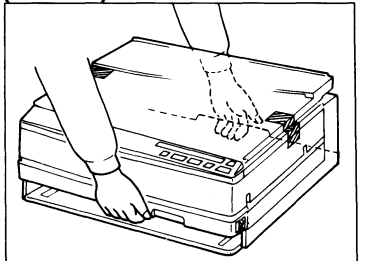
3-1. Short Distance (Room to Room)

1. **Remove the copy tray and manual feed guide/paper tray.**
2. **Remove the cassette tray.**
3. **Secure the slider with strips of tape.**

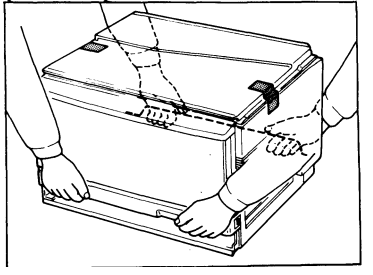
CAUTION: When transporting the copier, always use the grips on the front and rear to handle the copier. Never grip the bottom plate of the copier.



(FT2050)



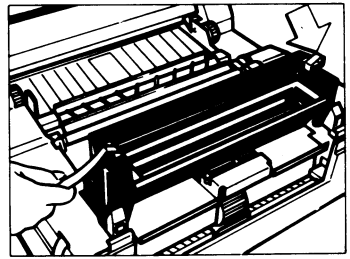
(FT2070)

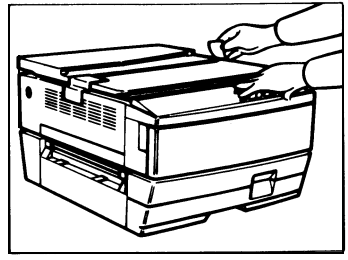


3-2. Long Distance (by vehicle)

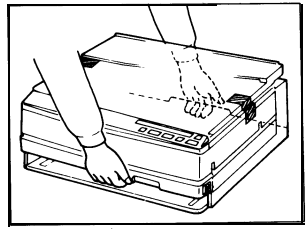
1. Remove the copy tray and manual feed guide/paper tray.
2. Remove the cassette tray.
3. Open the clamshell and secure the development unit with strips of tape.
4. Secure the slider with strips of tape.

CAUTION : * While transporting the copier, always cover the copier to avoid direct sunshine.
* When the copier is in a vehicle, do not expose it to extreme hot or cold conditions.
* When transporting the copier, always use the grips on the front and rear to handle the copier.
Never grip the bottom plate of the copier.

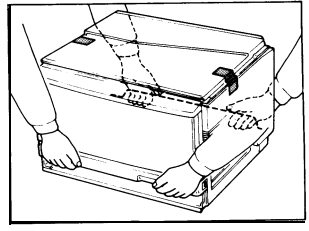




(FT2050)



(FT2070)



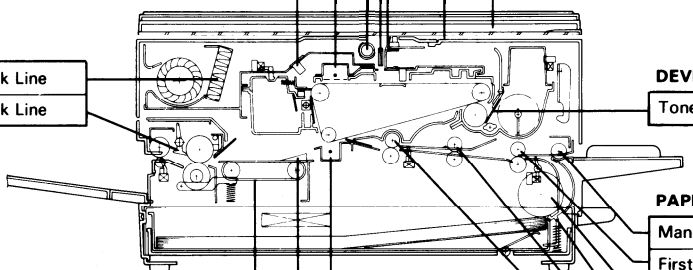
SECTION 4

SERVICE TABLES AND REMARKS

4-1. Maintenance Guide

Note: This guide shows the items to be cleaned and their effect on the copies if they are not clean. Clean these items as per the maintenance table.

[FT2050]



CHARGE CORONA

Charge Corona Wire	White Stripes

QUENCHING

Quenching Lamp	Dirty Copies

FUSING

Thermistor (Fusing)	Black Line
Hot Roller Strippers	Black Line

TRANSPORT

Transport Belt	Dirty Copies
Transport Guide Plate	Dirty Copies

TRANSFER CORONA

Transfer Corona Wire	Faint Copies

OPTICS & EXPOSURE

Exposure Lamp	Dirty Copies
Fiber Optics	Faint Copies
Reflector	Dirty Copies
Exposure Glass	Dirty Copies
Platen Cover Sheet	Dirty Copies

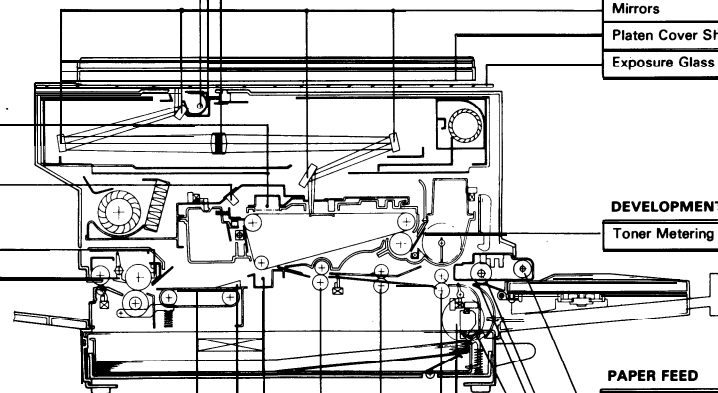
DEVELOPMENT

Toner Metering Blade	White Stripes

PAPER FEED

Manual Feed Roller	Misfeed
First Relay Roller	Misfeed
Paper Feed Roller	Misfeed
Friction Pad	Double Feed
Second Relay Roller	Misfeed
Registration Roller	Registration Bad

[FT2070]



OPTICS & EXPOSURE

Exposure Lamp	Dirty Copies
Reflector	Dirty Copies
Lens	Dirty Copies
Mirrors	Dirty Copies
Platen Cover Sheet	Dirty Copies
Exposure Glass	Dirty Copies

CHARGE CORONA

Charge Corona Wire	White Stripes

QUENCHING

Quenching Lamp	Dirty Copies

FUSING

Thermistor (Fusing)	Black Line
Hot Roller Strippers	Black Line

DEVELOPMENT

Toner Metering Blade	White Stripes

PAPER FEED

Pick-up Roller	Misfeed
Tray Feed Roller	Misfeed
Tray Friction Pad	Double Feed
Friction Pad	Double Feed
Paper Feed Roller	Misfeed
First Relay Roller	Misfeed
Second Relay Roller	Misfeed
Registration Roller	Registration Bad

TRANSPORT

Transport Belt	Dirty Copies
Transport Guide Plate	Dirty Copies

TRANSFER CORONA

Transfer Corona Wire	Faint Copies

4-2. Maintenance Table

NOTE: When you visit the customer for a service call, perform the following.

SECTION	ITEM TO BE CLEANED	MATERIAL TO BE USED
Erase and Optics	1. Erase Lamp/Master Sensor	Soft Cloth (Water) or Blower Brush
	2. Fiber Optics (FT2050)	Fiber Optics/Corona Wire Cleaner or Silicone Cloth
	3. Exposure Glass	Soft Cloth (Glass Cleaner)
	4. Platen Cover Sheet	Soft Cloth (Water or Alcohol)
	5. Exposure Lamp	Wet Soft Cloth, then Dry Soft Cloth
	6. Reflector	Silicone Cloth
	7. Exposure Sensor (FT2050)	Blower Brush
	8. Auto ID Sensor	Blower Brush
	9. Lens/Mirrors (FT2070)	Silicone Cloth
Development and Quenching	1. Toner Metering Blade	Toner Agitator (when necessary)
	2. Quenching Lamp	Soft Cloth (Water) or Blower Brush

SECTION	ITEM TO BE CLEANED	MATERIAL TO BE USED
Paper Feed and Transport	1. Paper Feed Roller	Soft Cloth (Water)
	2. Friction Pad	Soft Cloth (Water)
	3. 1st Relay Roller	Soft Cloth (Water)
	4. 2nd Relay Roller	Soft Cloth (Water)
	5. Registration Roller	Soft Cloth (Water)
	6. Cassette Pad	Soft Cloth (Water)
	7. Paper Guide Plates	Soft Cloth (Water)
	8. Transport Belt	Soft Cloth (Water)
	9. Paper Tray Pads (FT2070)	Soft Cloth (Water)
	10. Pick-up Roller (FT2070)	Soft Cloth (Water)
	11. Tray Feed Roller (FT2070)	Soft Cloth (Water)
Fusing	1. Hot Roller Strippers	Soft Cloth (Water)
	2. Thermistor	Soft Cloth (Alcohol)
	3. Paper Guide Plates	Soft Cloth (Water)
Corona	1. Charge Corona Wire	Fiber Optics/Corona Wire Cleaner or Blower Brush
	2. Transfer Corona Wire	Cotton Swabs or Soft Cloth (Alcohol)
	3. Corona Casings	Soft Cloth (Water)
	4. Transfer Guide Plate	Soft Cloth (Water)
Others	1. Grid Plate of Master Unit	Blower Brush

4-3. Lubrication Table

NOTE: Lubrication must be done within the number of copies indicated in the following table.

SECTION	ITEM TO BE LUBRICATED	NO. OF COPIES	LUBRICATING MATERIAL
Erase and Optics	1. Fiber Optics Holder (FT2050)	As Necessary	Grease-501
Paper Feed and Transport	1. Paper Feed Clutch Spring	60 K	Mobil Temp 78
	2. 1st Relay Clutch Spring	60 K	Mobil Temp 78
	3. Registration Clutch Spring	60 K	Mobil Temp 78
	4. Tray Feed Clutch Spring (FT2070)	60 K	Mobil Temp 78
	5. Pick-up Clutch Spring (FT2070)	60 K	Mobil Temp 78
Others	1. Master Clutch Spring	60 K	Mobil Temp 78

4-4. Expected Life of Parts

NOTE: Main parts have the following expected service life.

SECTION	PART DESCRIPTION	EXPECTED SERVICE LIFE
Development	1. Toner Metering Blade	60 K (Black) 6 K (Color)
Paper Feed and Transport	1. Friction Pad 2. Tray Friction Pad (FT2070)	60 K 60 K
Fusing	1. Hot Roller 2. Hot Roller Strippers 3. Pressure Roller	120K 120K 180K
Corona	1. Charge Corona Wire 2. Transfer Corona Wire	80 K 80 K

4-5. Special Tools and Lubricants

NO.	DESCRIPTION	PART NO.	REMARKS
1.	Positioning Ring	52169003	
2.	Test Chart OS-A3	54209502	100 sheets/set
3.	Digital Multimeter	54209507	BECKMAN RMS3030
4.	Deluxe Test Lead . Accessory Kit	54209508	BECKMAN DL241
5.	Grease - Mobil Temp 78	54479078	400 g/can
6.	Grease - Shin-etsu Silicon G-501	52039501	50 g/bottle

4-6. Points to Remember

Master Unit

1. Never touch the master belt and do not apply oil or an organic solvent to prevent the master belt from being deformed.
2. When the master unit is out of the machine or the upper clamshell is open, avoid exposing it to a bright light or direct sun light to prevent the master belt from being light fatigued.
3. Always store master unit in a cool and dry place.
4. Do not leave master units in vehicles during hot weather. It does not matter whether the master units are installed in machines or separate.
5. The variable resistor for adjusting the master sensor is factory preset and should not be adjusted in the field.
6. Keep the master unit level when it is out of the copier.

Charge

1. The variable resistor (VR-C) is factory preset and should not be adjusted in the field.
2. Do not touch the corona wire with oily hands.
3. Instruct the operator how and when to use the corona wire/fiber optics cleaner.
4. Clean the corona wire at every service call.
5. Clean the grid plate with a blower brush.

Optics

1. Clean the reflector, fiber optics/lens and mirrors, exposure lamp at every service call.
2. The variable resistor (VR - 1) on the exposure sensor board is factory preset and should not be adjusted in the field (FT2050).
3. The 2nd mirror positioning screws are factory preset and should not be adjusted in the field. (FT2070)
4. The exposure lamp position should be adjusted when the exposure lamp has been removed or replaced. (FT2070)
5. Check the copy image at every service call and adjust it if necessary. (FT2070)
6. The exposure glass has markings on every corner of its upper surface. When replacing the exposure glass, make sure that the markings are on the side facing upwards. (FT2070)

Development

1. When white vertical lines appear on the copy, use the toner agitator to clean the toner metering blade.
2. Do not use the toner agitator unless copy image problems occur. This is to prevent damaging the toner metering blade.
3. Be careful not to nick or scratch the development roller surface.
4. Be careful not to use a black development unit for color copying, or a color development unit for black copying.
5. Always store toner in a cool and dry place.
6. Instruct the operator to ensure that the appropriate color plate is attached to all color development units.

Transfer

1. The variable resistor (VR-T) on the transfer/bias power pack is factory preset and should not be adjusted in the field.
2. Do not touch the transfer corona wire with oily hands.
3. Clean the transfer corona wire with a soft cloth at every service call.

Paper Feed

1. Do not allow the paper feed rollers to become oily or dirty.
2. The improper installation of paper size actuators causes misfeeds and erase problems.
3. Instruct the operator to ensure that one sheet of OHP transparency is loaded at a time and that the OHP transparency lever is down when copying onto transparencies (FT2070).
4. The improper setting of side and rear fences of the paper tray may cause erase problems (FT2070).

Fusing

1. Be careful not to damage the hot roller strippers.
2. Do not touch the fusing lamp with your bare hands.
3. Make sure that the fusing lamp does not contact the hot roller.
4. Clean the fusing thermistor and hot roller strippers at every service call.

SECTION 5

REPLACEMEMT AND ADJUSTMENT

5-1. Exterior Removal

FT2050

Upper Clamshell 5-2

Lower Clamshell 5-3

FT2070

Upper Clamshell 5-4-1

Lower Clamshell 5-4-2

Upper Clamshell

(1) Platen cover (2 buttons)
1. Pull up both buttons and lift the platen cover slightly and slide it to the rear to remove.

(2) Copy Tray

(3) Upper Right Cover (4 screws)
1. Open the clamshell slowly.
2. Move the slider to the far left home position by pressing the slider lock lever.

(4) Upper Left Cover (4 screws)
1. Open the front cover.
2. Move the slider to the right, and loosen the slider stopper screw.

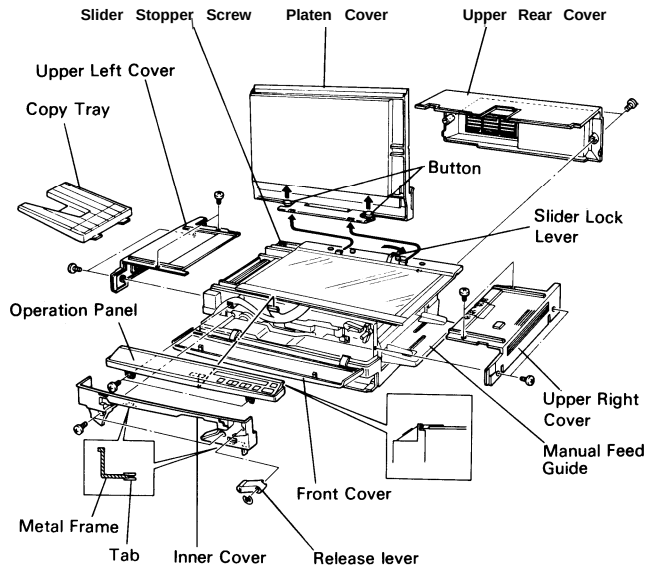
(5) Operation Panel (2 screws and 1 connector)
1. Open the front cover to remove the screws.

NOTE: * When installing the operation panel, the edge of the exposure glass must be in the groove of the operation panel.

(6) Upper Rear Cover (2 screws)

(7) Inner Cover (1 E-ring and 2 screws)
1. Remove the operation panel.
2. Open the clamshell and remove the release lever.

NOTE: * When installing the inner cover, be sure that the positioning tabs engage with the metal frame correctly.



Lower Clamshell

(1) **Front Cover (2 screws)**

1. **Open the clamshell to remove the screws.**
2. **Pull out the cassette holder to remove the front cover.**

NOTE: * When installing the front cover, be sure that the tabs engage with the positioning notches.

(2) Manual Feed Guide

1. **Open the clamshell.**
2. **Lift the manual feed guide and remove.**

(3) Lower Right Cover (2 screws)

(4) Lower Rear Cover (4 screws)

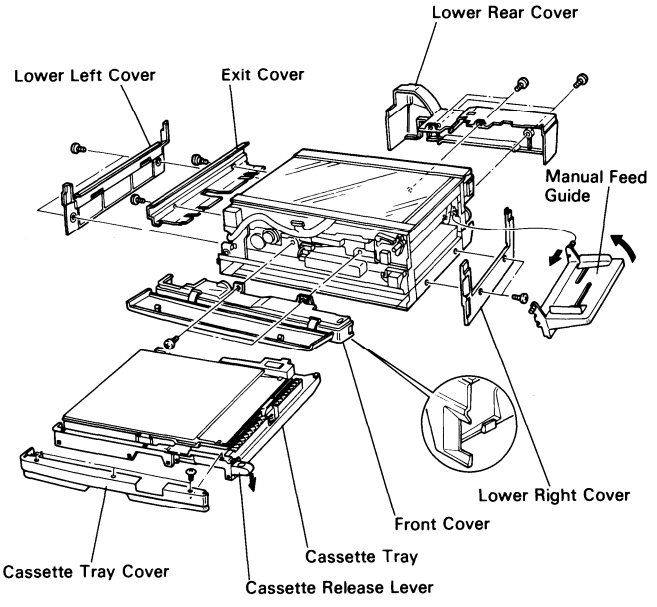
1. **Remove the upper rear cover (2 screws).**
2. **Open the clamshell and remove.**

NOTE: * Remember that one screw is longer than the other three screws. The longer screw prevents the upper paper feed guide plate from being turned over.

(5) Lower Left Cover (2 screws)

1. **Remove the front cover (2 screws), the upper rear cover (2 screws), and lower rear cover (4 screws) to remove the lower left cover.**

(6) Exit Cover (2 screws)



(7) Cassette Tray

1. Push down the cassette release lever.
2. Pull out the cassette tray.
3* Lift the front of the cassette tray slightly, and remove.

(8) Cassette Tray Cover (3 screws)

1. Pull out the cassette tray and remove.

Upper Clamshell (FT2070)

(1) Platen cover (2 pushlocks)
1. Pull up both pushlocks, lift the platen cover slightly and slide it to the rear to remove.

(2) Copy Tray

(3) Upper Right Cover (4 screws)
1. Open the front cover.
2. Move the slider to the far left.

(4) Upper Left Cover (4 screws)
1. Open the front cover.
2. Move the slider to the right.

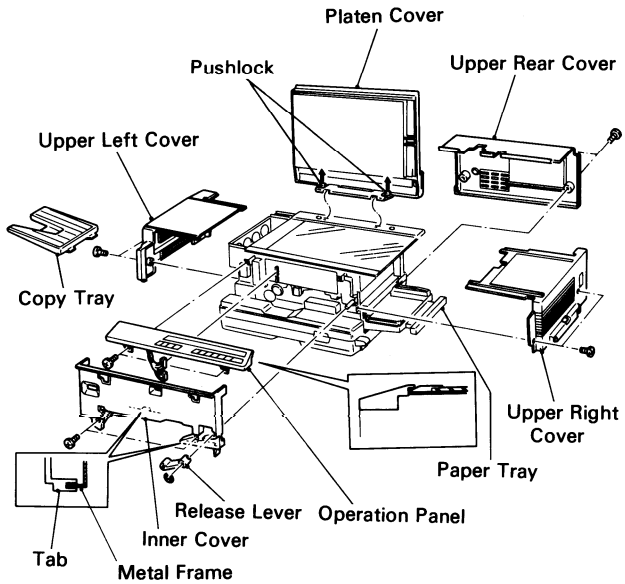
(5) Inner Cover (1 E-ring and 2 screws)
1. Move the slider to the center and open the clamshell.
2. Remove the release lever (1 E-ring).

NOTE: When installing the inner cover, be sure that the positioning tabs engage with the metal frame correctly.

(6) Operation Panel (2 screws and 1 connector)
1. Remove the inner cover (1 E-ring and 2 screws).

NOTE: When installing the operation panel, the edge of the exposure glass must be in the groove of the operation panel.

(7) Upper Rear Cover (2 screws)



Lower Clamshell (FT2070)

(1) Front Cover (2 screws)

1. Open the clamshell to remove the screws.
2. Pull out the cassette holder to remove the front cover.

NOTE: * When installing the front cover, make sure that the tabs engage with the positioning notches. "

(2) Paper Tray

1. Open the clamshell.
2. Lift paper tray and remove.

(3) Lower Right Cover (2 screws)

(4) Lower Rear Cover (4 screws)

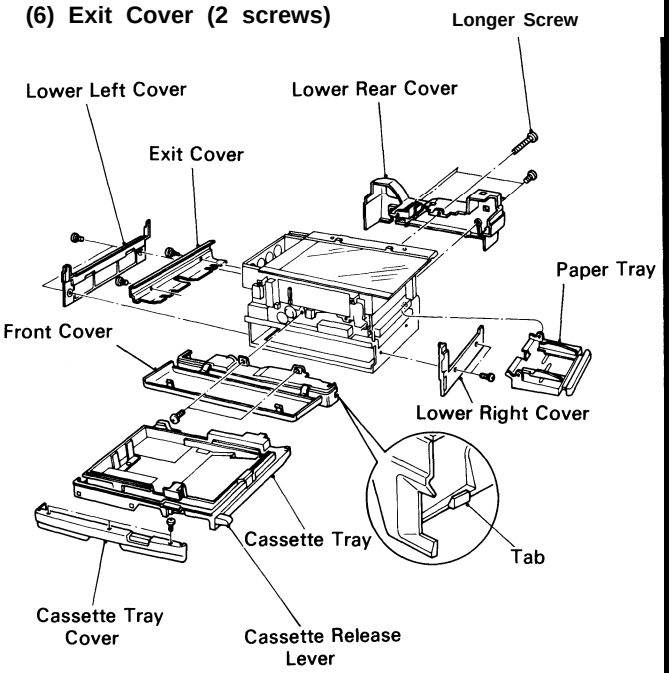
1. Remove the upper rear cover (2 screws).
2. Open the clamshell and remove,

NOTE: * Remember that one screw is longer than the other three screws. The longer screw prevents the upper paper feed guide plate from being turned over.

(5) Lower Left Cover (2 screws)

1. Remove the front cover (2 screws), the upper rear cover (2 screws), and lower rear cover (4 screws) to remove the lower left cover.

(6) Exit Cover (2 screws)



5-2. Erase and Optics

FT2050

Erase Lamp Replacement 5-6
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Slider Drive Wire Replacement 5-8
Fiber Optics Removal 5-9
Exposure Lamp Unit Replacement 5-10
Slider Clutch Removal 5-11
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FT2070

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Slider Removal 5-12-4
Slider Drive Wire Replacement 5-12-5
Lens Drive Wire Replacement 5-12-7
Lens Drive Motor Replacement 5-12-9
Home Position Sensor Replacement 5-12-10

Erase Lamp Replacement

1. **Open the clamshell and remove the upper right cover.**

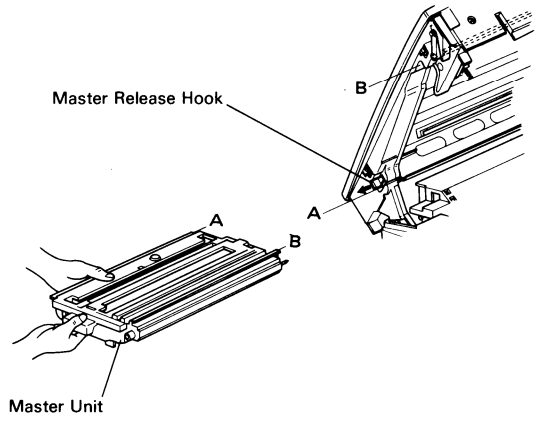
2. **Pull the master release hook and remove the master unit.**

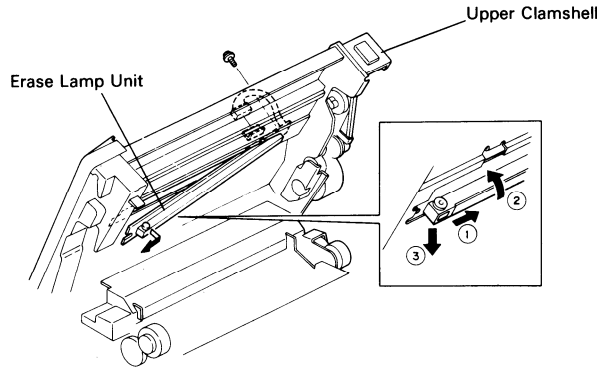
CAUTION: * Do not touch the master belt (purple material), and avoid exposing it to light.

NOTE: * When installing the master unit, make sure that the master rides in the guide rails.

3. **Remove one screw and one connector.**

4. **Slide the erase lamp unit to the rear and remove by turning its front end counterclockwise.**





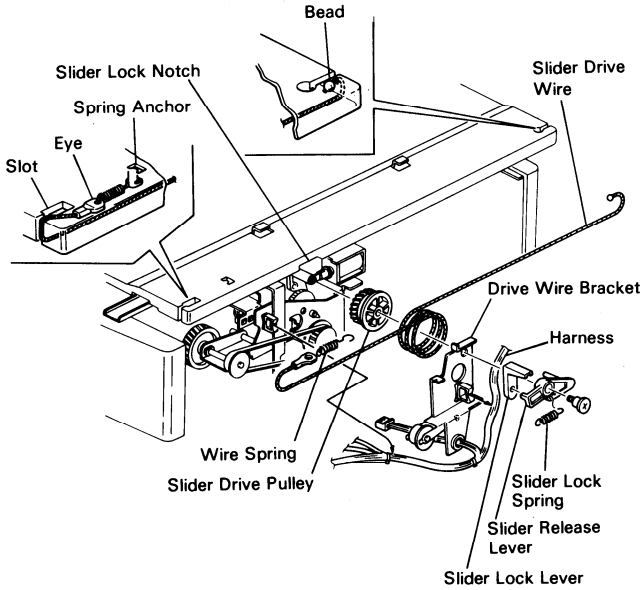
Slider Removal

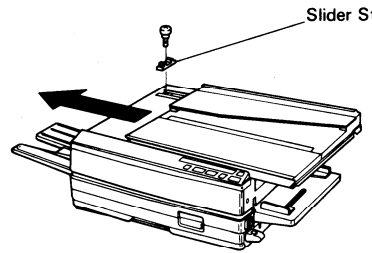
1. Remove the platen cover.
2. Remove the upper rear cover,
3. Remove the harness from the 2 clamps.
4. Remove the drive wire bracket (1 screw and 1 connector) together with the slider lock lever, slider release lever, and slider lock spring.
5. Remove the slider drive wire together with the slider drive pulley (1 wire spring).

NOTE: * Position the slider lock notch just above the slider drive pulley so that the slider drive pulley can be removed.

6. Remove the slider stopper, move the slider to the left, and then remove.

NOTE: * For re-installation, see "Slider Drive Wire Replacement" section.
* Be careful not to damage the actuator of the home position switch when re-installing the slider.





Slider Drive Wire Replacement

1. Remove the slider drive wire. (See step 1 to 5 of "Slider Removal" section.)
2. Position the slider lock notch just above the slider drive pulley.
3. Thread the bead on the drive wire into the round hole on the right side of the slider.
4. Wind the drive wire around the slider drive pulley three times as shown to the right.
5. Re-install the slider drive pulley,

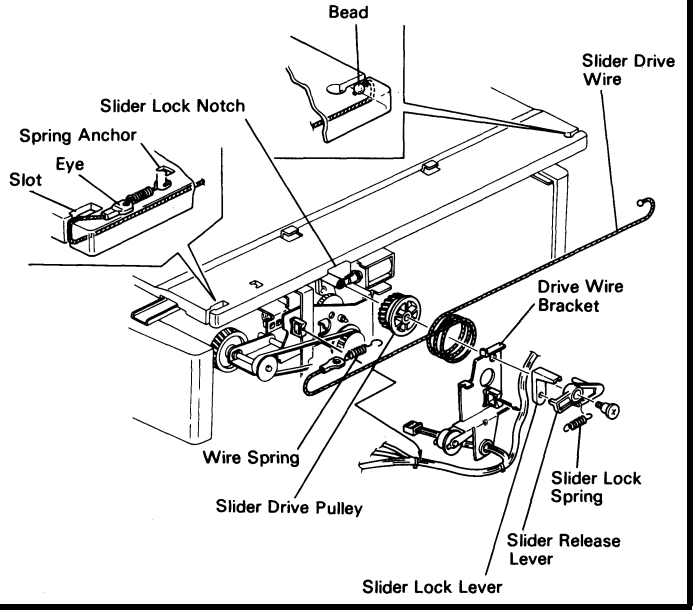
NOTE: * Make sure the slider drive pulley engages properly.

6. Thread the eye of the drive wire into the slot on the left side of the slider.
7. Attach the end of the wire spring onto the eye and the another end onto the spring anchor.

NOTE: * Make sure that the slider moves smoothly and that the wire does not double over.

8. Re-install the drive wire bracket, slider lock lever, slider release lever, harness and slider rock spring 1 stud screw and 1 connector

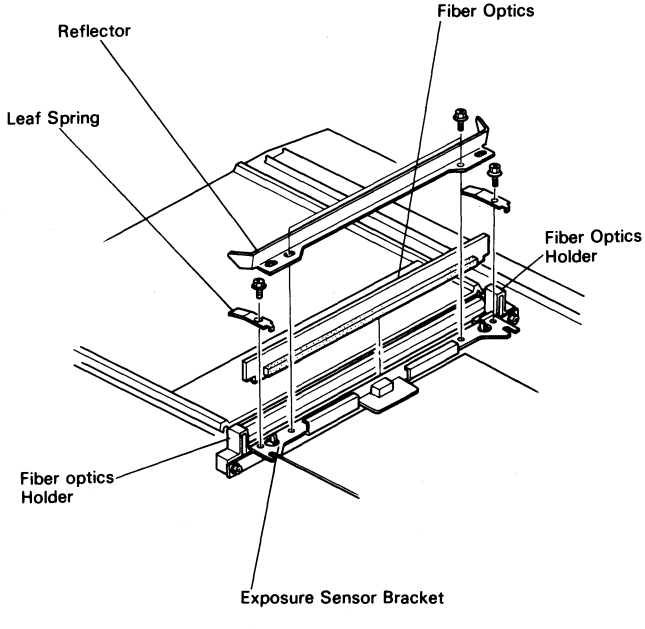
NOTE: * When re-installing the slider, the front end of the slider must be in the groove of the operation panel, and rest on the fiber optics holder.



Fiber Optics Removal

1. Remove the slider. (See "Slider Removal" section.)
2. Remove the upper right cover (4 screws).
3. Close the clamshell.
4. Remove the reflector (2 screws).
5. Remove the two leaf springs (1 screw each).
6. Loosen the exposure sensor bracket (2 screws).
7. Pull out the fiber optics,

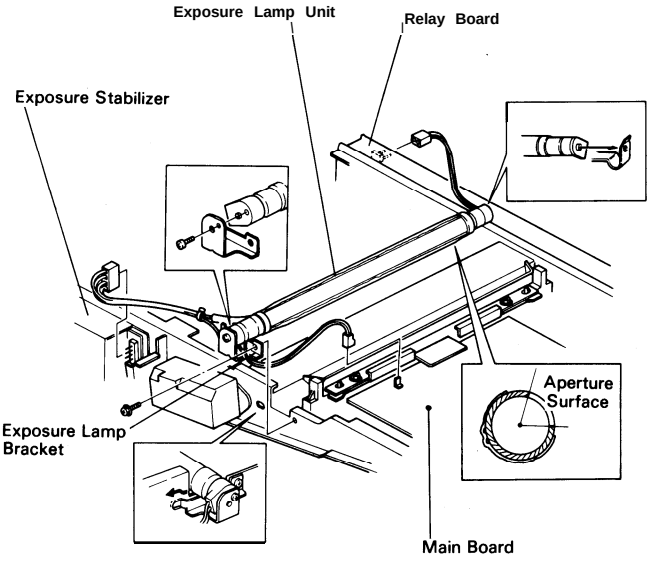
NOTE: * Do not touch the upper and lower surfaces of the fiber optics.
* Fiber optics must contact the fiber optics holders.



Exposure Lamp Unit Replacement

1. Remove the slider. (See "Slider Removal" section.)
2. Remove the operation panel (2 screws and 1 connector).
3. Remove the upper left cover and upper right cover.
4. Close the clamshell.
5. Remove the exposure lamp unit together with exposure lamp bracket (1 screw, 1 washer and 3 connectors).
6. Remove the exposure lamp unit from the exposure lamp bracket (1 screw).

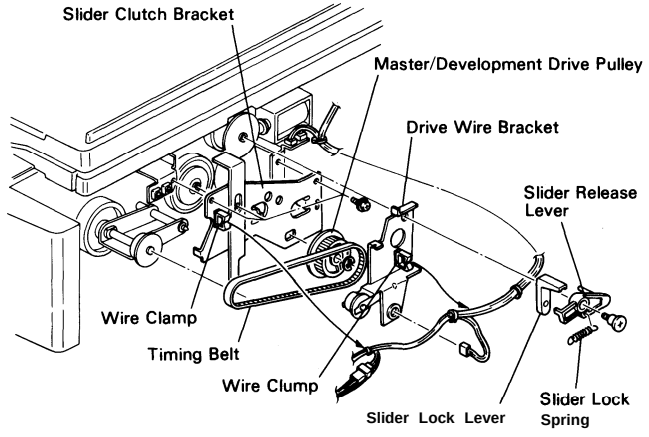
NOTE: * Avoid touching the aperture of the exposure lamp.
* When re-installing the exposure lamp unit, make sure the aperture is facing up.

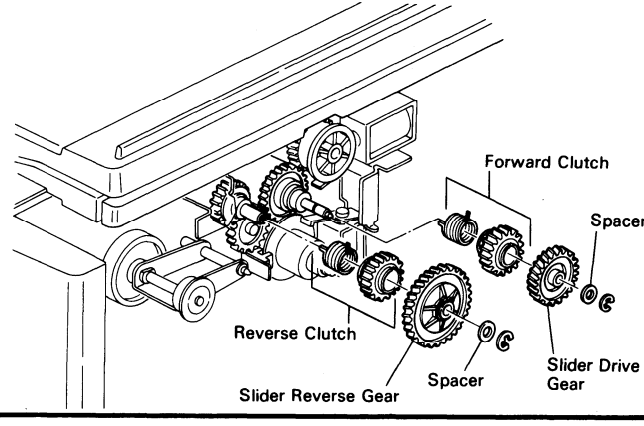


Slider Clutch Removal

1. **Remove the upper rear cover.**
2. **Remove the drive wire bracket. (See "Slider Removal" section.)**
3. **Remove the timing belt and the master/ development drive pulley (1 E-ring).**
4. **Remove the slider clutch bracket (3 screws).**
5. **Remove the slider drive gear and the slider reverse gear (1 E-ring and 1 spacer each), then remove the forward and the reverse clutch.**

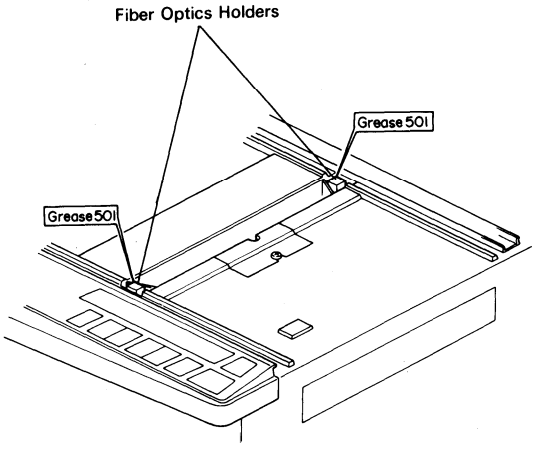
NOTE: * When re-installing the spring clutch, be sure to insert the two projections of the clutch spring in the notches.





Fiber Optics Holder Lubrication

1. **Remove the slider. (See "Slider Removal" section.)**
2. **Apply Grease 501 to the top of the fiber optics holders.**



Erase Lamp Replacement (FT2070)

1. Unplug the copier.
2. Remove the upper right cover and upper rear cover.
3. Remove the ac drive board (2 screws).
4. Uncouple the 8 pin connector behind the ac drive board.
5. Open the clamshell while pressing down the release lock.

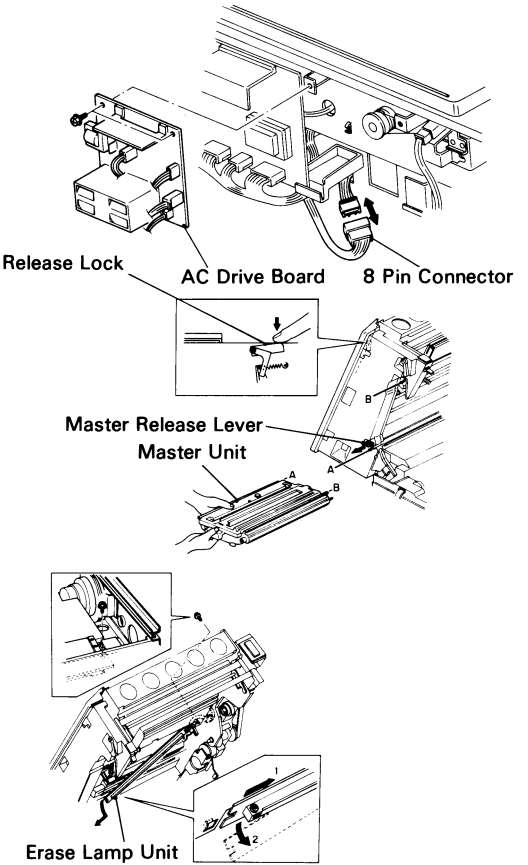
CAUTION: * Be careful not to damage the slider.

6. Pull the master release lever and remove the master unit.

CAUTION: * Do not touch the master belt (purple material), and avoid exposing it to light.

NOTE: * When installing the master unit, make sure that the master rides in the guide rails.

7. Remove the erase lamp unit by sliding it to the rear and then to the left (1 screw).

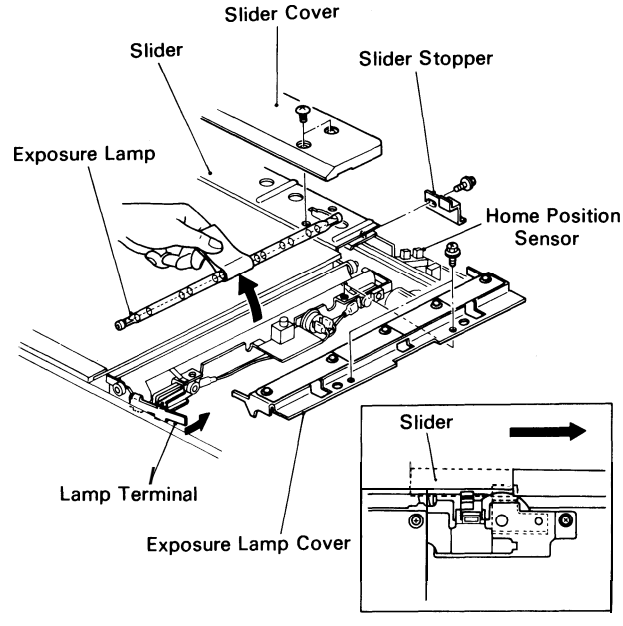


Exposure Lamp Replacement (FT2070)

1. Remove the platen cover and slider cover (5 screws).
2. Remove the upper right cover and the upper rear cover.
3. Remove the slider stopper (1 screw).
4. Move the slider to the far left, past the home position sensor.
5. Remove the exposure lamp cover (2 screws).
6. Rotate the lamp terminal as shown, and take out the lamp.

CAUTION: * Do not handle the exposure lamp with your bare hands. Use a strip of paper. Oil from your fingers will result in lamp discoloration.

7. Install a new exposure lamp.
8. Check the lamp position and the light intensity. (See "Exposure Lamp Positioning" and "Light Intensity Adjustment" sections.)



Exposure Lamp Positioning (FT2070)

1. Remove the upper right cover and the upper rear cover.
2. Remove the slider stopper (1 screw).
3. Move the slider to the far left, past the home position sensor. (See "Exposure Lamp Replacement" section.)

– Horizontal Positioning —

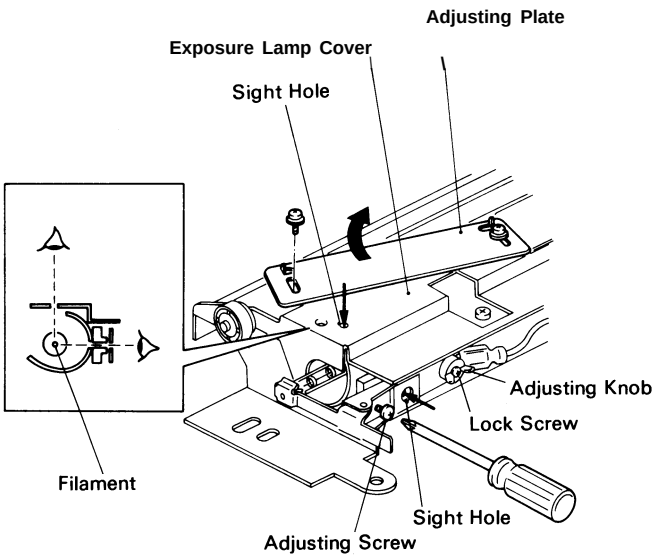
4. Slide the front and rear adjusting plates out of the way so that the sight holes can be seen (1 screw each).
5. View the lamp filament through the sight holes on the top of the exposure lamp cover. The filament should be directly beneath the sight holes.
6. To correct the position of the filament, turn the adjusting screws.

– Vertical Adjustment –

7. View the lamp filament from the right through the sight holes. The filament should be the level with the sight holes on the side of the reflector.
8. To correct the position of the filament, turn the adjusting knobs until the correct position is achieved.

NOTE: * Be sure to tighten the lock screw after adjusting the lamp position.

9. Check for uneven exposure and light intensity. (See “Uneven Image Density Adjustment” and “Light Intensity Adjustment” sections.)



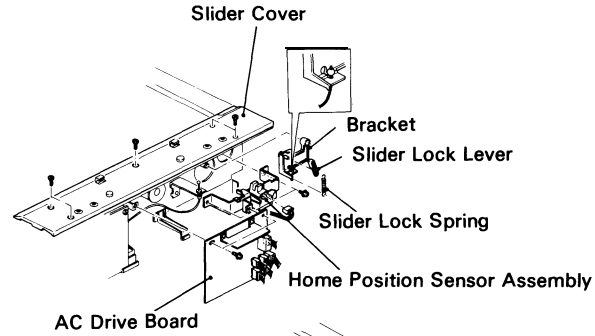
Slider Removal (FT2070)

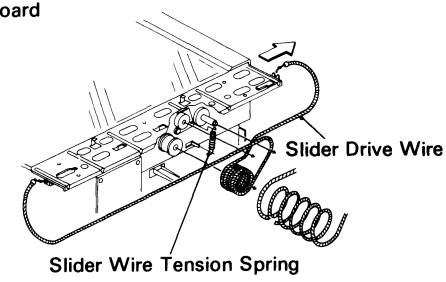
1. Remove the platen cover and upper rear cover.
2. Remove the slider cover (5 screws).
3. Remove the ac drive board (2 screws).

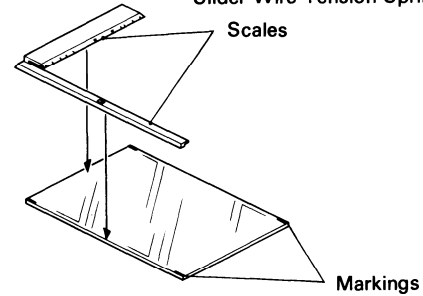
NOTE: * It is not necessary to disconnect the connectors.

4. Remove the slider lock spring.
5. Remove the slider home position sensor assembly (2 screws).
6. Remove the slider lock lever and bracket.
7. Remove the slider wire tension spring.
8. Remove the slider drive wire.
9. Remove the slider by moving it to the far left.

NOTE: * For reinstallation, see "Slider Drive Wire Replacement" section.
* The exposure glass has markings on every corner of its upper surface. When replacing the exposure glass, make sure that the markings are on the side facing upwards.







Slider Drive Wire Replacement (FT2070)

1. **Remove the slider drive wire. (See "Slider Removal" section.)**

– Installation –

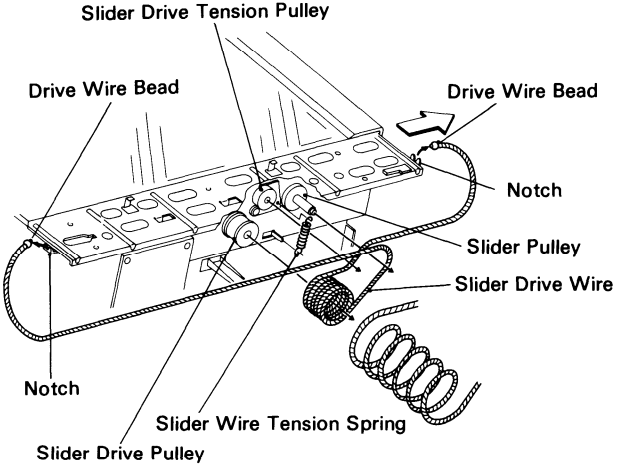
2. **Insert one drive wire bead in the notch at the far right of the slider.**

3. **Draw the wire" over the slider pulley (inside track) and under the slider drive tension pulley.**

4. **Wind the drive wire around the slider drive pulley (five and a half turns) and around the slider pulley (half a turn).**

5. **Insert the other drive wire bead in the notch at the far left of the slider and connect the slider drive tension spring.**

NOTE: * Make sure that the slider moves smoothly and that the wire does not double over.

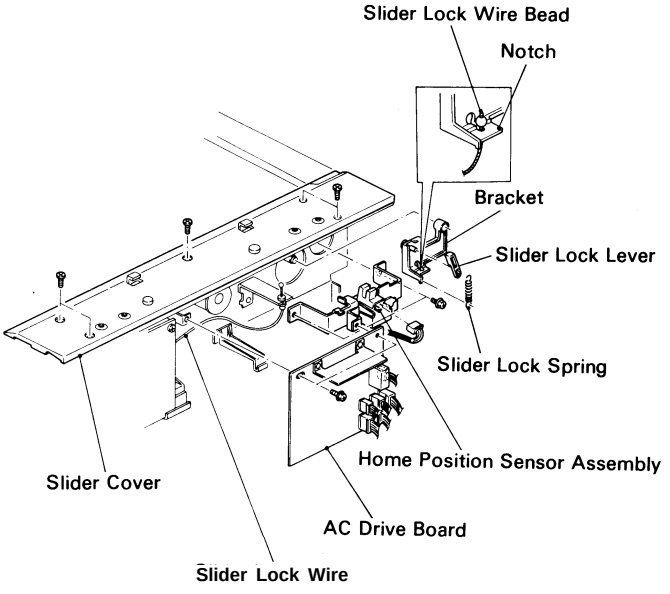


6. Seat the slider lock wire bead in its notch as shown to the right.

7. Reinstall the slider lock lever and bracket after seating the bead of the slider lock wire.

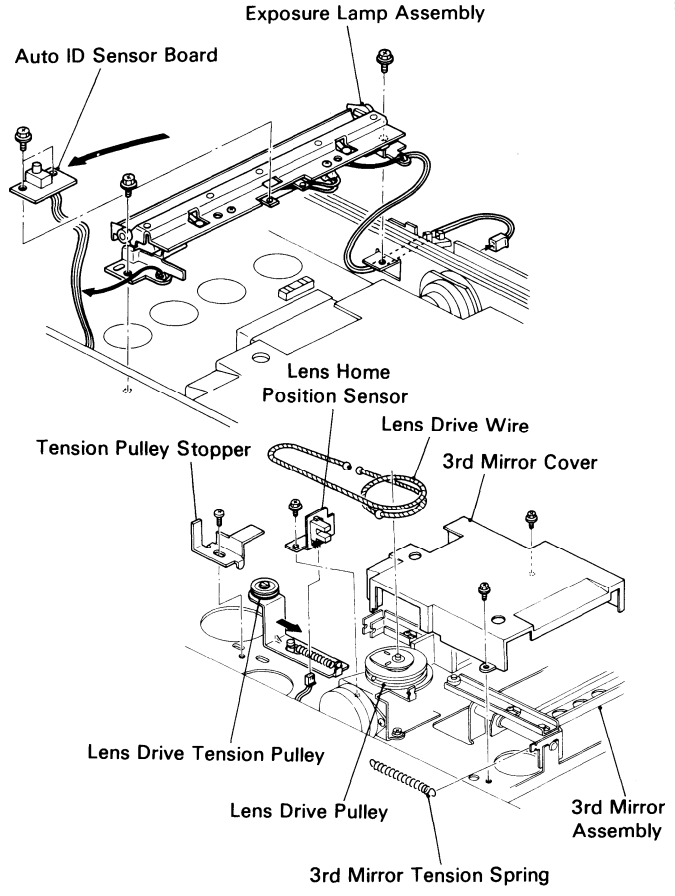
8. Reinstall the home position sensor assembly (2 screws) and the slider lock spring.

9. Reinstall the ac drive board (2 screws).



Lens Drive Wire Replacement (FT2070)

1. **Remove the upper right cover**
2. **Remove the slider. (See "Slider Removal" section.)**
3. **Remove the Auto ID sensor board from the exposure lamp assembly (2 screws and 1 harness clamp). .**
4. **Remove the exposure lamp assembly (2 screws and 1 connector).**
5. **Remove the 3rd mirror cover (2 screws).**
6. **Remove the lens home position sensor together with the bracket (1 screw).**
7. **Remove the 3rd mirror tension spring and slide the 3rd mirror assembly away from the lens drive pulley.**
8. **Remove the tension pulley stopper (1 screw).**
9. **Slide the lens drive tension pulley towards the lens drive pulley, and remove the lens drive wire.**



– Installation –

9. Place the short end bead of the new wire in the right slot of the lens housing assembly.

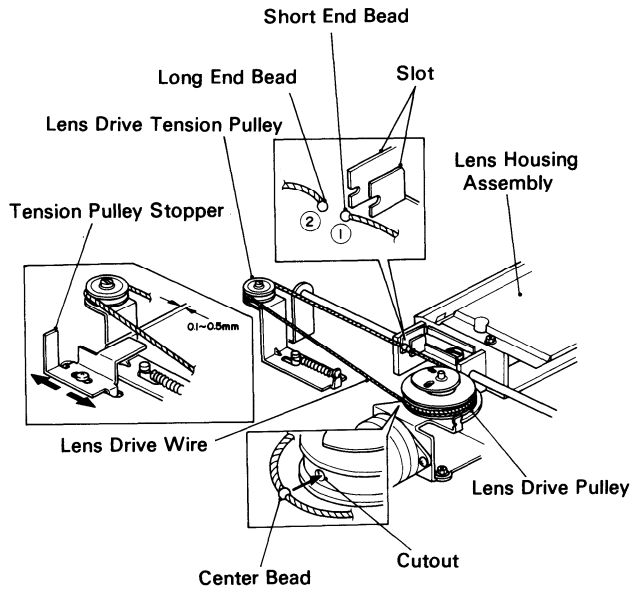
10. Loop the drive wire one and half turns around the lens drive pulley. Position the center bead in the cutout of the lens drive pulley.

11. Run the drive wire around the lens drive tension pulley.

12. Hook the long end bead in the left slot of the lens housing.

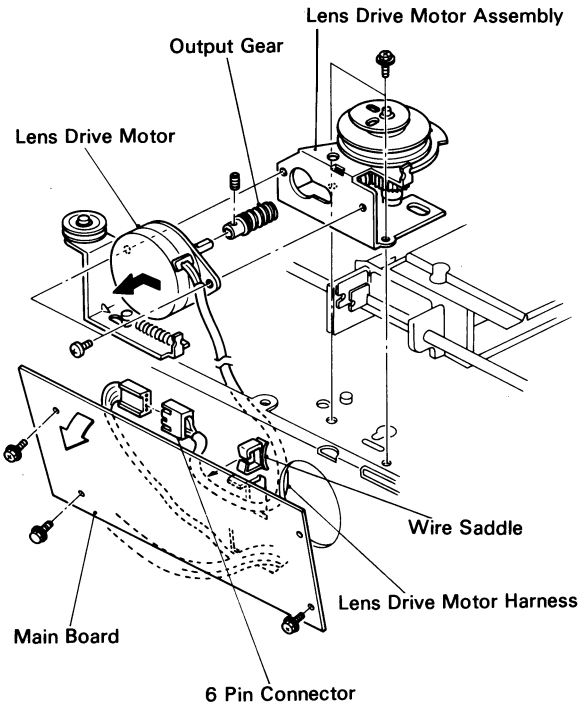
13. Reinstall the tension pulley stopper (1 screw). The gap between the lens drive tension pulley and the tension pulley stopper should be 0.3 ± 0.2 mm.

14. Reassemble.



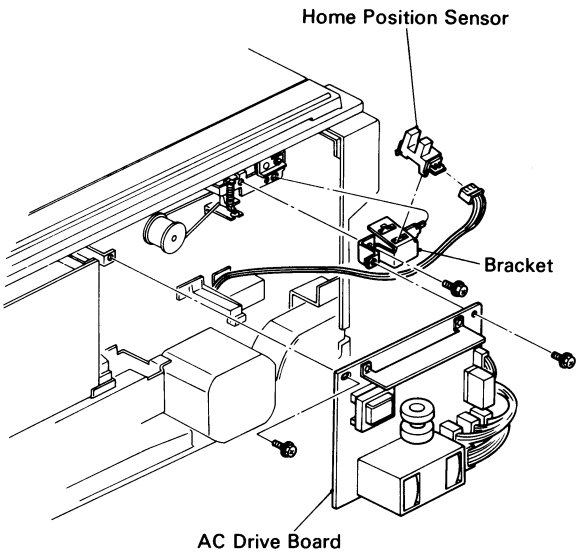
Lens Drive Motor Replacement (FT2070)

1. **Remove the inner cover.**
2. **Remove the main board (3 screws).**
3. **Uncouple the 6 pin connector behind the main board and remove the lens drive motor harness from the wire clamp.**
4. **Remove the lens drive wire. (See "Lens Drive Wire Replacement" section.)**
5. **Remove the lens drive motor assembly (2 screws).**
6. **Remove the lens drive motor unit from the assembly (2 screws).**
7. **Separate the lens drive motor from the output gear (1 allen set screw).**



Home Position Sensor Replacement (FT2070)

1. Remove the upper rear cover.
2. Remove the ac drive board (2 screws).
3. Remove the home position sensor together with the bracket (2 screws).
4. Remove the home position sensor from the bracket (1 connector).



5-3. Development and Quenching

Toner Metering Blade Replacement 5-14

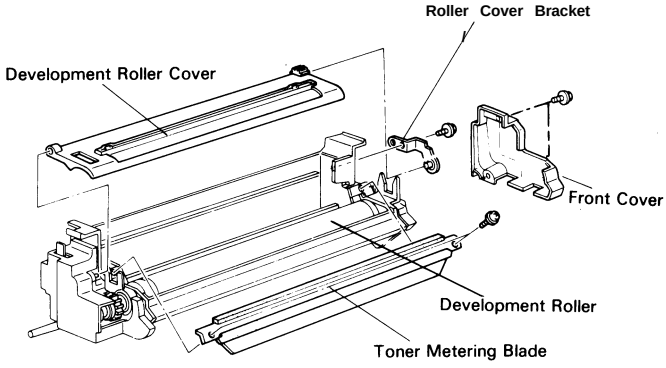
Quenching Lamp Replacement (FT2050) 5-15

Quenching Lamp Replacement (FT2070) 5-16

Toner Metering Blade Replacement

1. Open the clamshell and remove the development unit.
2. Remove the toner cartridge.
3. Remove the front cover of the development unit (2 screws).
4. Remove the roller cover bracket (1 screw), and take off the development roller cover.
5. Remove the toner metering blade (2 screws).

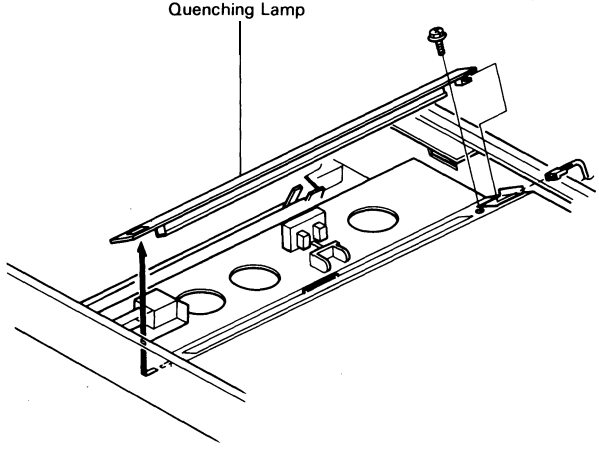
NOTE: * Avoid damaging or bending the metering blade.
* Do not touch the surface of the development roller.



Quenching Lamp Replacement

1. **Remove the upper left cover.**

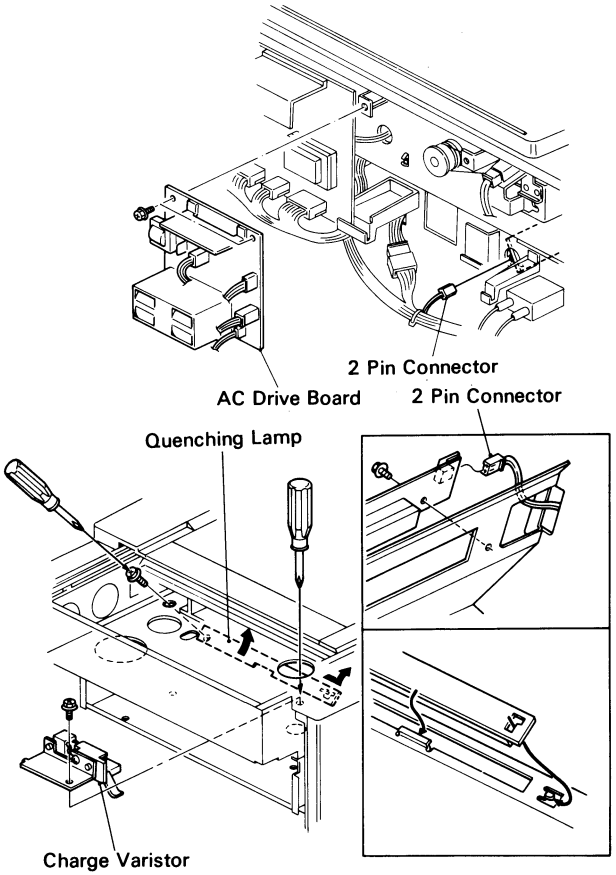
2. **Remove the quenching lamp (1 screw and 1 connector).**



Quenching Lamp Replacement (FT2070)

1. Unplug the copier.
2. Remove the upper rear cover.
3. Remove the ac drive board (2 screws).
4. Uncouple the 2 pin connector behind the ac drive board.
5. Remove the toner overflow sensor assembly. (See "Toner Overflow Sensor Replacement.")
6. Remove the charge varistor (1 screw).
7. Remove the quenching lamp by sliding the quenching lamp unit in the direction of the arrows and lifting it out.

NOTE: * When reassembling, make sure that the quenching lamp unit is seated correctly.



5-4. Paper Feed and Transport

Paper Feed Roller Replacement 5-18

Friction Pad Replacement 5-19

Paper Feed Clutch Lubrication 5-20

Registration Clutch Lubrication 5-21

Paper Size Switch Replacement 5-22

Paper Feed Sensor Replacement 5-23

Transport Belt Replacement.. 5-24

Paper End Sensor Replacement (FT2070) 5-24-1

Pick-up Roller Replacement (FT2070) 5-24-2

Tray Feed Roller Replacement (FT2070) 5-24-3

Pick-up and Tray Feed Clutches Lubrication (FT2070) 5-24-5

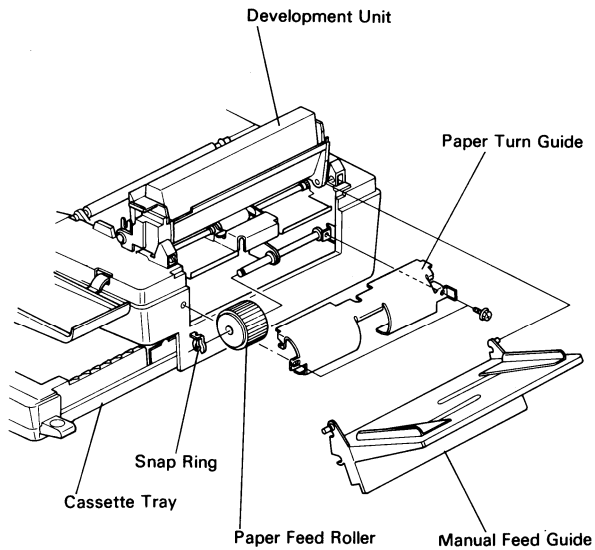
Paper Width Sensor Replacement (FT2070) 5-24-6

Paper Length Sensor Replacement (FT2070) 5-24-7

Paper Feed Roller Replacement

1. Pull out the cassette tray from the copier.
2. Open the clamshell and remove the manual feed guide.
4. Remove the paper feed roller (1 snap ring).

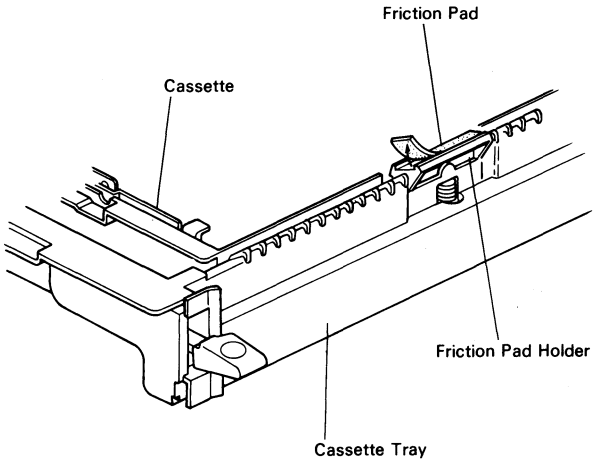
NOTE: * Be careful not to touch the paper feed roller with oily hands.



Friction Pad Replacement

1. **Pull out the cassette tray from the copier.**
2. **Peal off the friction pad from the friction pad holder.**
3. **Install new friction pad.**

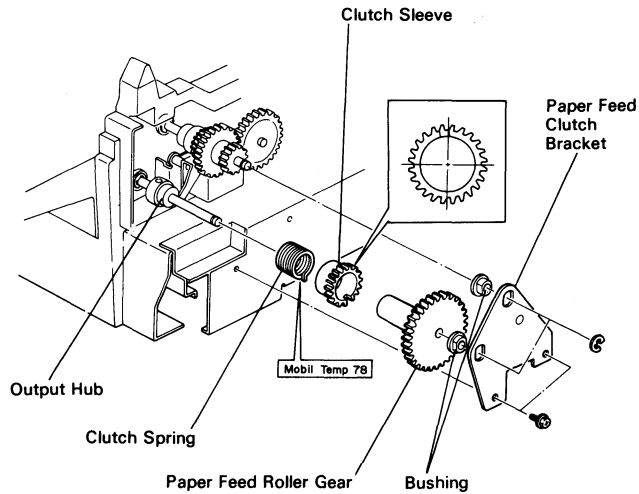
NOTE: * Be careful not to touch the friction pad with oily hands.



Paper Feed Clutch Lubrication

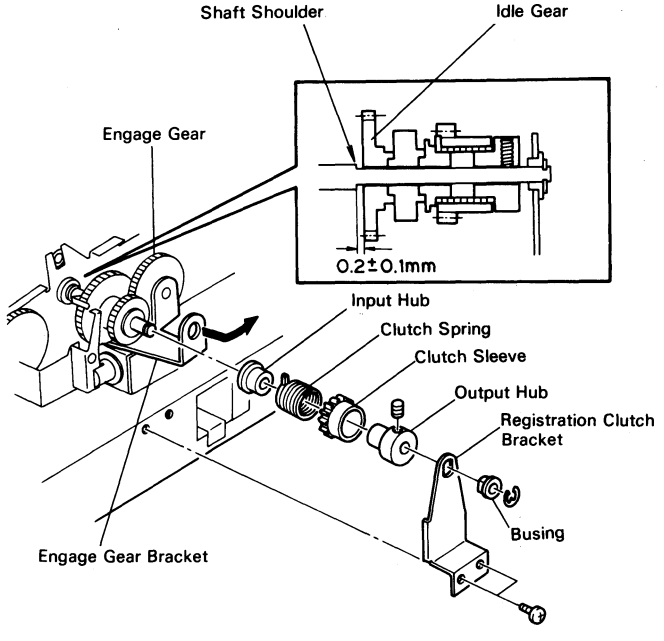
1. Open the clamshell and remove the lower rear cover.
2. Remove the paper feed clutch bracket (2 screws, 2 E-rings, and 2 bushings).
3. Remove the paper feed roller gear, clutch sleeve, and clutch spring.
4. Apply Mobil Temp 78 to the clutch spring and output hub.

NOTE: * The teeth of the clutches have one direction. Be careful not to install them incorrectly.



Registration Clutch Lubrication

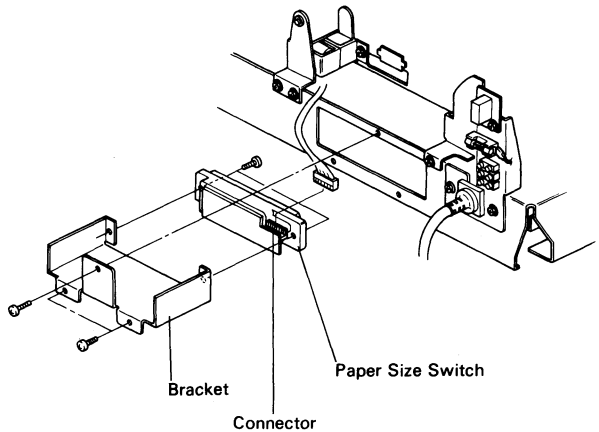
1. Remove the upper rear cover and the lower rear cover.
2. Remove the registration clutch bracket (2 screws, 1 E-ring and 1 bushing).
3. Pull the engage gear bracket and move it to the upper right.
4. Remove the output hub, clutch sleeve, clutch spring and the input hub (1 allen set screw).
5. Apply Mobil Temp 78 to the clutch.
6. Re-install the clutch so that the radial end of the spring and the gear side of the clutch sleeve are facing the registration roller.
7. Position a 0.2mm thick gauge between the shaft shoulder and the idle gear.
8. Push the registration clutch towards the



Paper Size Switch Replacement

1. Pull out the cassette tray.
2. Remove the lower rear cover.
3. Remove the paper size switch together with the bracket (3 screws).
4. Remove the paper size switch from the bracket (2 screws and 1 connector).

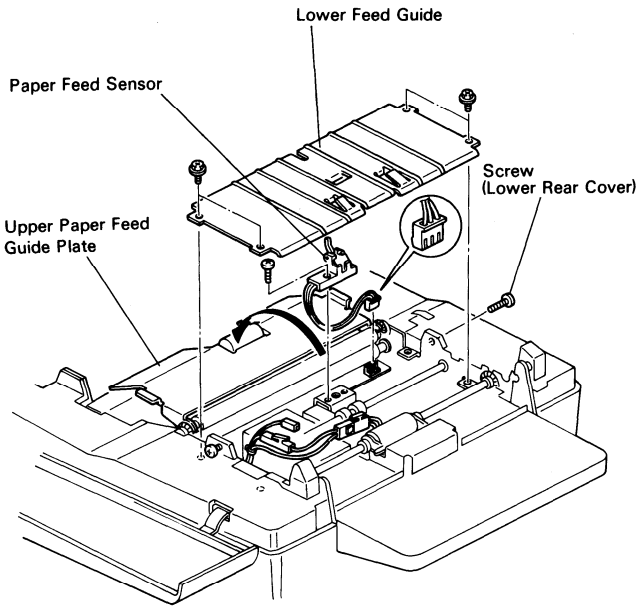
NOTE: * When installing the paper size switch in the bracket, be sure that the connector faces to the upper right hand side, as shown in the figure.



Paper Feed Sensor Replacement

1. Open the clamshell.
2. Remove the development unit.
3. Loosen the screw securing the lower rear cover.
4. Swing up the upper paper feed guide plate.
5. Remove the lower feed guide (4 screws).
6. Remove the paper feed sensor (1 screw and 1 connector).

NOTE: * When closing the clamshell, be sure to return the upper paper feed guide plate to its original position. Otherwise, the master will be damaged.
* Do not forget to tighten the screw securing the lower rear cover.



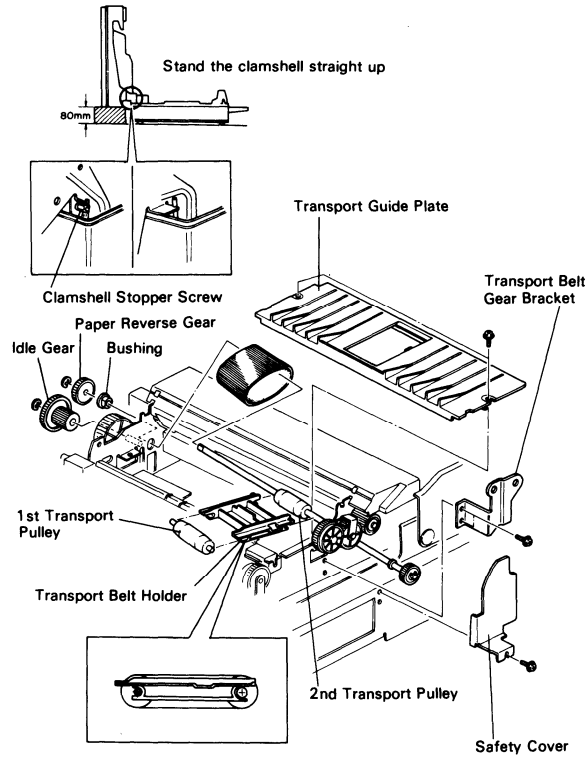
Transport Belt Replacement

1. Remove the copy tray.
2. Remove the front cover (2 screws), upper rear cover (2 screws), and lower rear cover (4 screws).
3. Remove the 2 clamshell stopper screws and stand the clamshell straight up.

NOTE: * When standing the clamshell straight up, place a block that has a height of approximately 80 mm (approx. 3") in front of exit cover as shown to the upper right.

4. Remove the transport guide plate (2 screws).
5. Remove the safety cover (1 screw).
6. Remove the transport belt gear bracket (2 screws).
7. Remove the idle gear (1 E-ring).
8. Remove the paper reverse gear (1 E-ring and bushing).
9. Remove the first transport pulley from the transport belt holder.
10. Remove the transport belt from the holder.

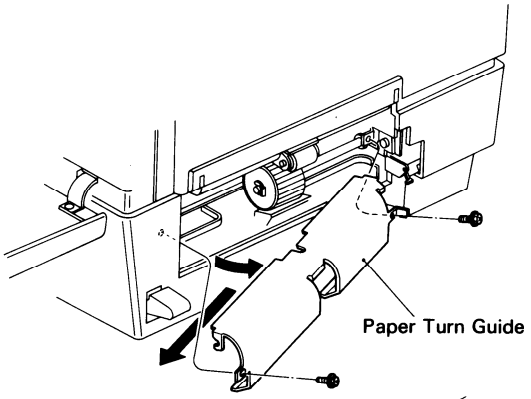
NOTE: * When reassembling, make sure that the 1st transport pulley rides in the small grooves of the transport belt holder.

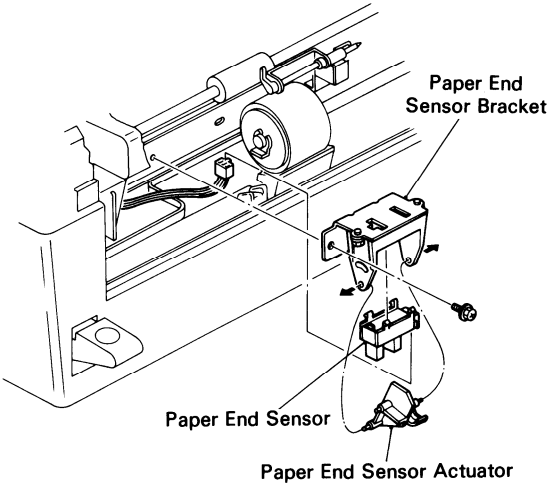


Paper End Sensor Replacement (FT2070)

1. Remove the paper tray.
2. Remove the paper turn guide by sliding it to the rear and pulling its front to the right (2 screws).
3. Remove the paper end sensor unit (1 screw and 1 connector).
4. Remove the paper end sensor actuator by flexing the paper end sensor bracket gently.
5. Separate the paper end sensor from the bracket (2 screws).

NOTE: * When reassembling, make sure that the paper end sensor unit is seated correctly.

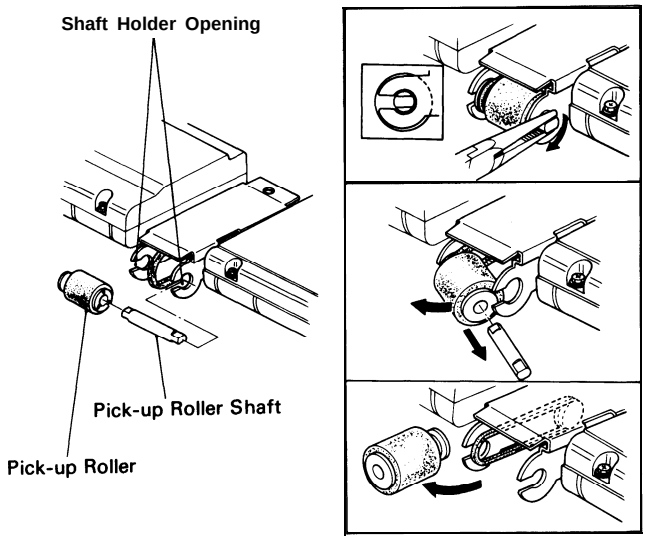




Pick-up Roller Replacement (FT2070)

1. Remove the paper tray.
2. Rotate the pick-up roller shaft so that the flat sides align with the shaft holder openings.
3. Pull the rear end of the roller shaft toward the right and slide it to the rear.
4. Remove the pick-up roller.

NOTE: * After reinstalling the pick-up roller, rotate the roller shaft so that the flat sides do not align with the shaft holder openings.

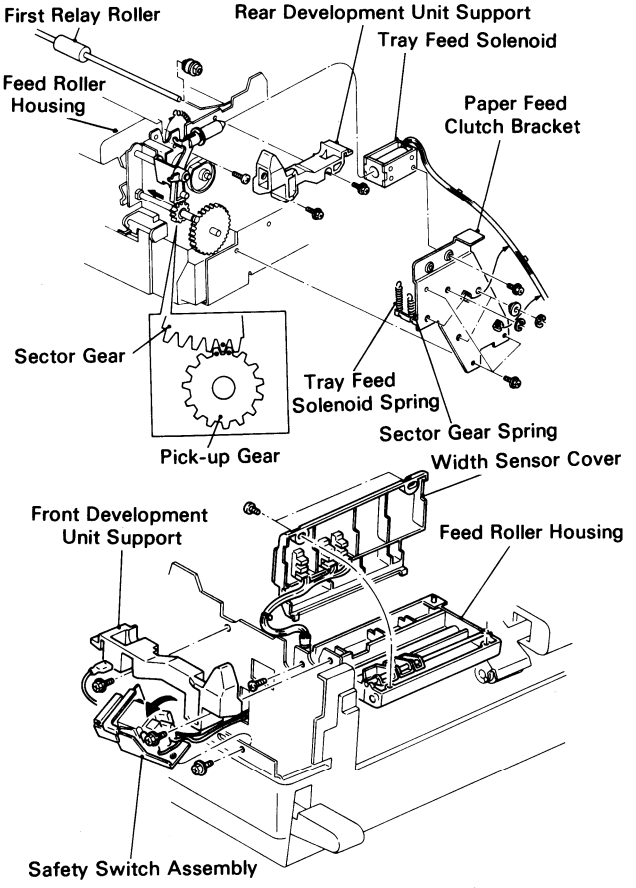


Tray Feed Roller Replacement (FT2070)

1. Remove the front cover, paper tray, and the lower rear cover.
2. Remove the development unit.
3. Remove the tray feed solenoid (2 screws and 2 harness clamps).
4. Unhook the sector gear spring and the tray feed solenoid spring.
5. Remove the paper feed clutch bracket (3 screws, 4 E-rings, and 4 bushings).
6. Remove the first relay roller (2 springs and 2 bushings).
7. Remove the rear development unit supports (2 screws).
8. Remove the safety switch assembly (1 screw).

NOTE: * It is not necessary to disconnect the safety switch.

9. Remove the front development unit support (2 screws).
10. Take off the width sensor cover (2 screws).



11. **Remove the front and rear screws securing the feed roller housing.**

12. **Remove the pick-up spring and the spring housing.**

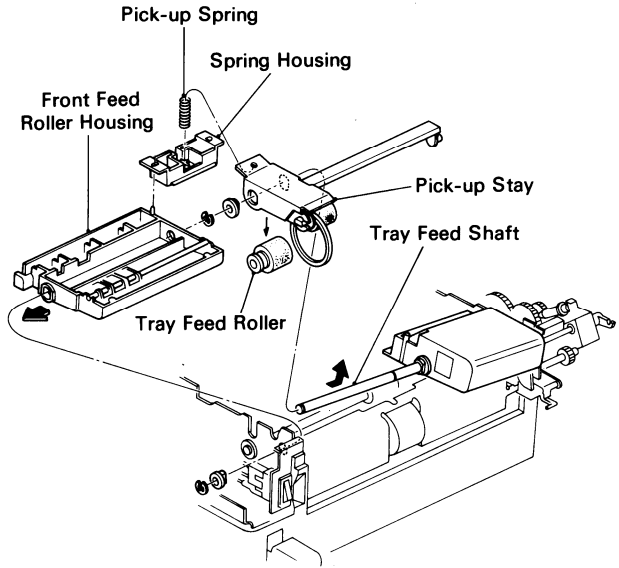
13. **Remove the E-ring and bushing from the front of the tray feed shaft. Slide the shaft to the rear and lift the front of the tray feed shaft.**

14. **Remove the front feed roller housing by sliding it to the front.**

15. **Remove the tray feed roller by sliding the pick-up stay to the front (1 E-ring and 1 bushing).**

NOTE: * As the tray feed roller has a one-way clutch, it is important to mount the roller correctly. The pick-up roller drive belt should be towards the front.

*** When replacing the paper feed clutch bracket, secure it with the three screws, then slide the pick-up gear slightly to the front and align the sector gear and the pick-up gear as shown in the figure. (The marked tooth on the sector gear fits in between the marked teeth of the pick-up gear.)**



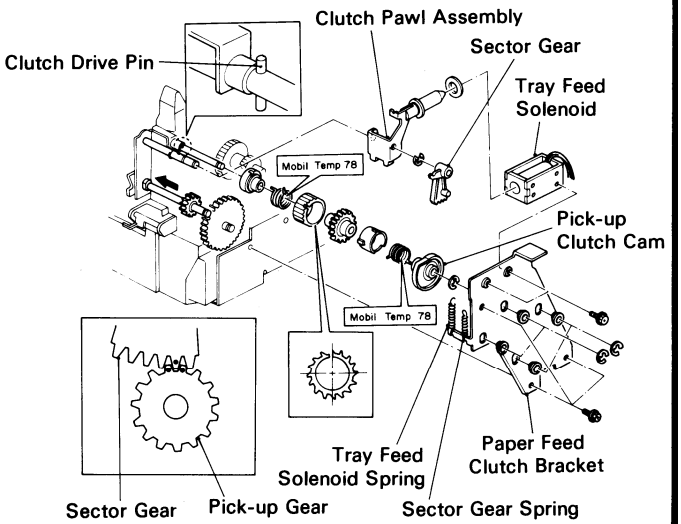
Pick-up and Tray Feed Clutch Lubrication (FT2070)

1. Remove the lower rear cover.
2. Remove the tray feed solenoid (2 screws and 2 harness clamps).
3. Unhook the sector gear spring and the tray feed solenoid spring.
4. Remove the paper feed clutch bracket (3 screws, 4 E-rings and 4 bushings).
5. Remove the sector gear.
6. Remove the pick-up clutch cam (1 E-ring).
7. Remove clutch pawl assembly (1 E-ring).
8. Remove the clutch assembly.
9. Disassemble and lubricate the pick-up clutch and tray feed clutch.

CAUTION: * Be careful not to loose the clutch drive pin.

NOTE: * When reinstalling the spring clutches, be sure to insert the projections of the clutch springs into the notches.

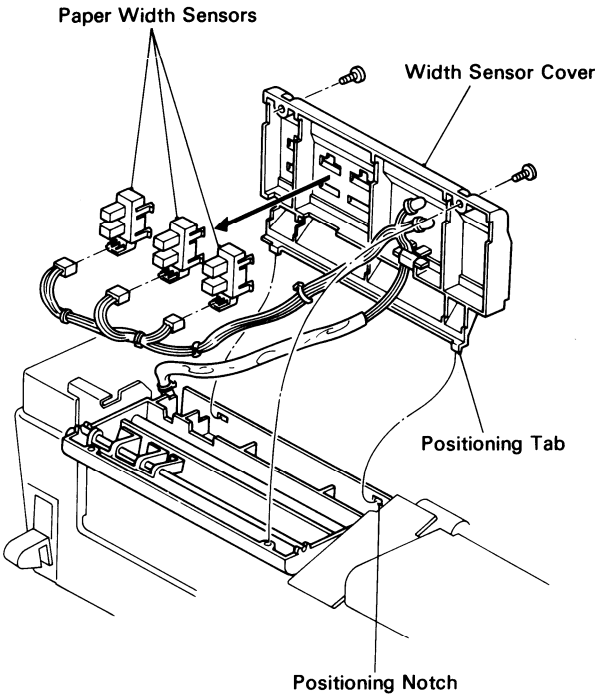
* When replacing the paper feed clutch bracket, secure it with the three screws, then slide the pick-up gear slightly to the front and align the sector gear and the pick-up gear. (The marked tooth on the sector gear fits between the marked teeth of the pick-up gear.)



Paper Width Sensor Replacement (FT2070)

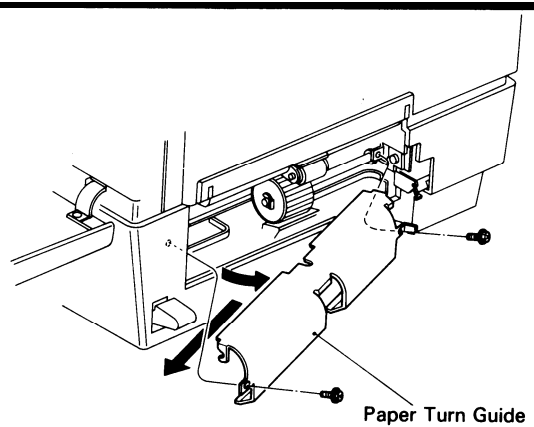
1. Open the clamshell.
2. Remove the development unit.
3. Remove the width sensor cover (2 screws).
4. Replace the paper width sensors (1 connector each).

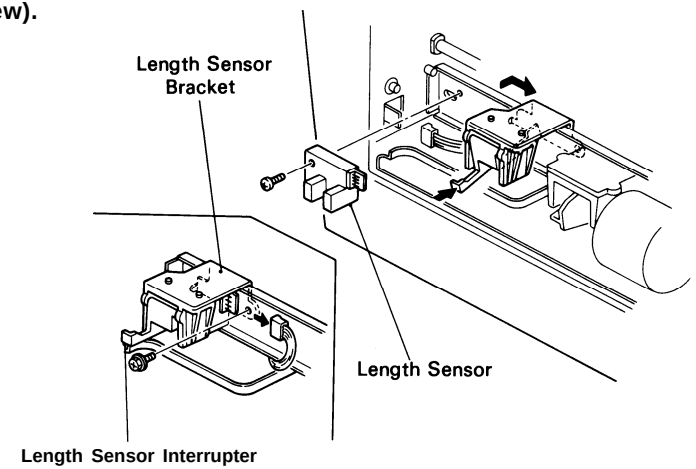
NOTE: * When reinstalling the width sensor cover, first insert the positioning tabs into the positioning notches.



Paper Length Sensor Replacement (FT2070)

1. Remove the paper tray.
2. Remove the paper turn guide (2 screws).
3. Disconnect the length sensor connector.
4. Remove the screw securing the length sensor bracket.
5. While pushing in the length sensor interrupter, slide the length sensor bracket to the right.
6. Replace the paper length sensor (1 screw).





5-5. Image Fusing

Hot Roller Replacement 5-26

Pressure Roller Replacement 5-28

Thermistor Replacement 5-29

Thermofuse Replacement 5-30

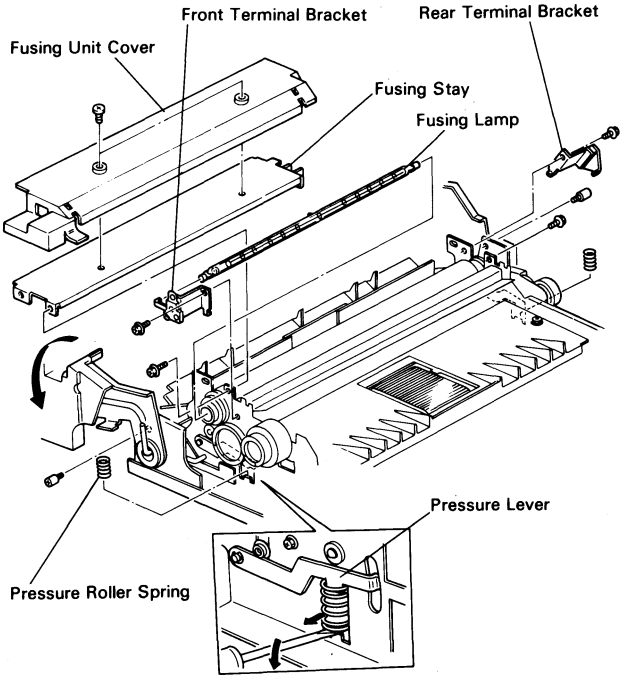
Hot Roller Strippers Replacement 5-31

Exit Sensor Replacement 5-32

Hot Roller Replacement

1. Open the exit assembly. (See "Hot Rollers Strippers Replacement" section.)
2. Open the clamshell and stand it straight up. (See "Transport Belt Replacement" section.)
3. Remove the fusing unit cover (2 screws).
4. Remove the fusing stay (4 screws).
5. Holding the front end of the fusing lamp, remove the front terminal bracket (1 screw).
6. Pull out the fusing lamp gently.
7. Remove the rear terminal bracket (1 screw).
8. Remove the safety cover (1 screw).
9. Remove the front and rear pressure roller springs.

CAUTION: * Remove the springs carefully as the springs have high tension.

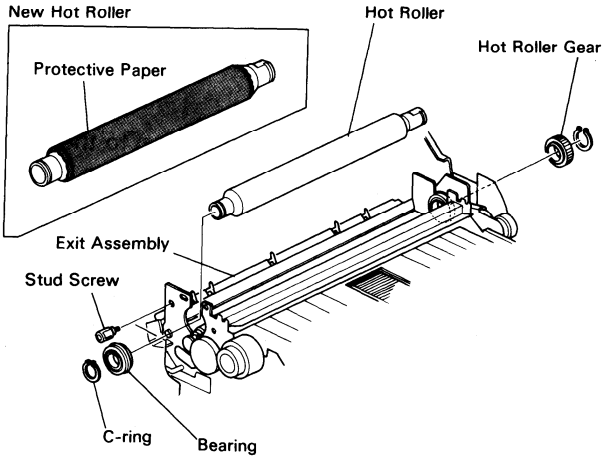


10. Remove the bearing from the front end of the hot roller (1 C-ring).

11. Remove the gear from the rear end of the hot roller (1 C-ring).

12. Remove the hot roller carefully.

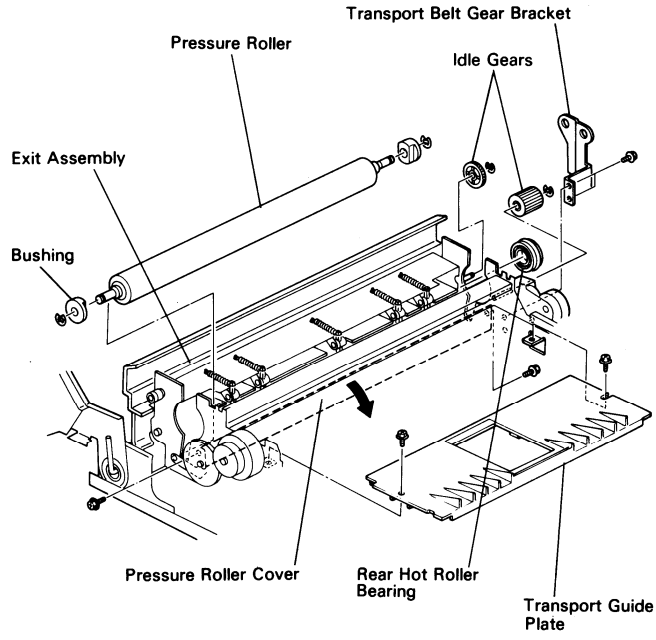
NOTE: * Be careful not to damage the hot roller.
* When installing the fusing lamp, make sure both "end of the fusing lamp properly contact the terminals.
* After re-installing the pressure roller springs, check that the springs are mounted into the pressure lever properly.



Pressure Roller Replacement

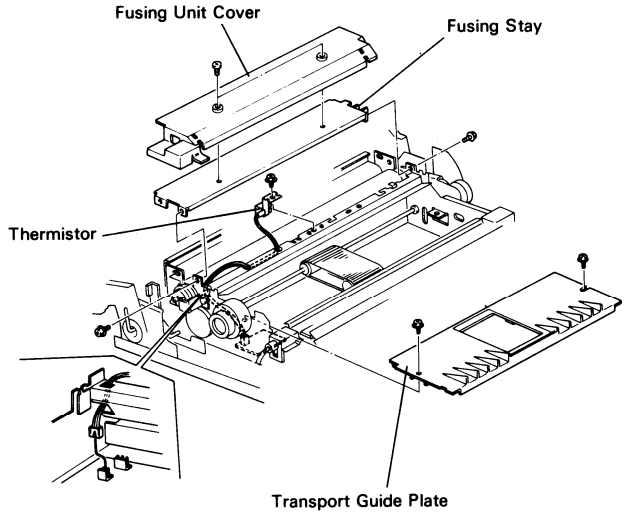
1. Remove the hot roller. (See "Hot Roller Replacement" section.)
2. Remove the transport belt gear bracket (2 screws).
3. Remove the 2 idle gears as shown to the right (1 E-ring each).
4. Remove the rear hot roller bearing.
5. Remove the transport guide plate (2 screws).
6. Swing the pressure roller cover away from the pressure roller (2 screws).
7. Remove the pressure roller.
8. Remove the front and rear bushings (1 E-ring each).

NOTE: * Be careful not to damage the pressure roller.



Thermistor Replacement

1. **Open the clamshell and stand it straight up. (See "Transport Belt Replacement" section.)**
2. **Remove the fusing unit cover (2 screws).**
3. **Remove the fusing stay (4screws). (See "Hot Roller Replacement" section.)**
4. **Remove the transport guide plate. (See "Transport Belt Replacement" section.)**
5. **Remove the thermistor (1 screw and 1 connector).**



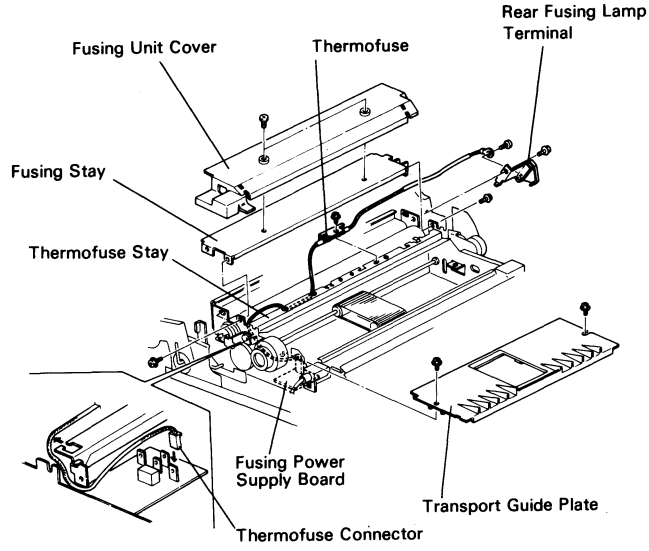
Thermofuse Replacement

1. Open the clamshell and stand it straight up. (See''Transport Belt Replacement" section.)
2. Remove the fusing unit cover (2 screws). (See "Hot Roller Replacement" section.)
3. Remove the fusing stay (4 screws).
4. Remove the transport guide plate (2 screws). (See "Transport Belt Replacement" section.)
5. Remove the rear fusing lamp terminal (1 screw).

CAUTION: * When removing the rear fusing lamp terminal, be careful not to damage the fusing lamp.

6. Remove the thermofuse harness from the rear fusing lamp terminal (1 screw).
7. Disconnect the thermofuse connector from the fusing power supply board.
8. Remove the screw securing the front end of the thermofuse stay.
9. Lift the thermofuse stay and disconnect the thermofuse connector from the stay.
10. Remove the thermofuse.

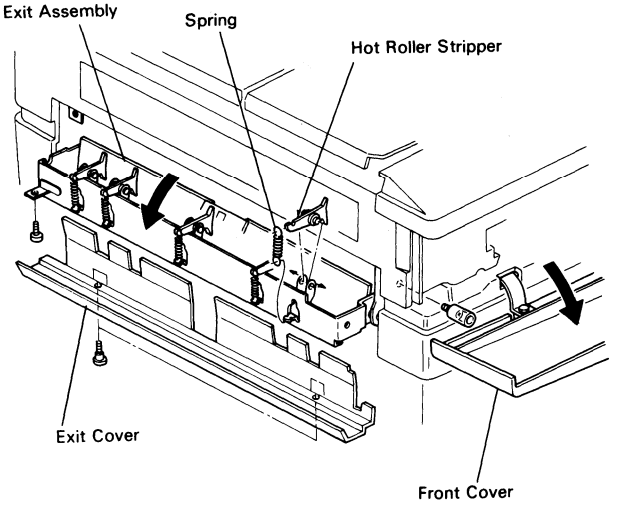
NOTE: * When installing the thermofuse, be sure to route the wire properly as shown in the figure.



Hot Roller Strippers Replacement

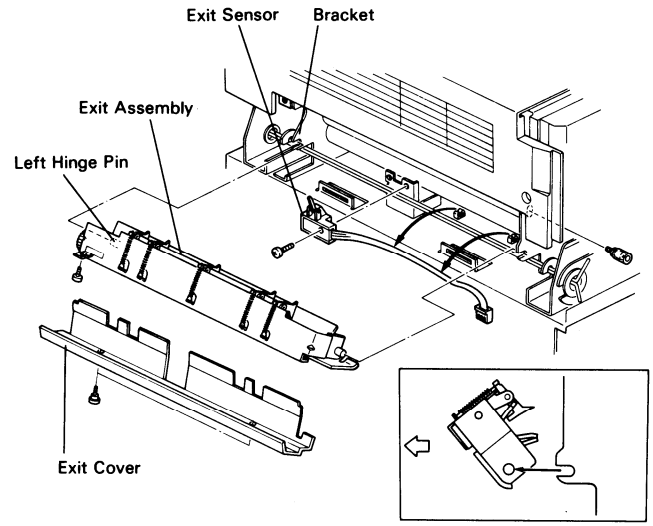
1. **Open the front cover.**
2. **Remove the exit cover.**
3. **Open the exit assembly (2** screws)
4. **Remove the hot roller strippers together with springs.**

NOTE: * It is advisable to replace the hot roller strippers as a set.



Exit Sensor Replacement

1. Remove the lower left cover (2 screws).
2. Open the front cover.
3. Remove the exit cover (2 screws).
4. Open the exit assembly and remove the exit assembly (2 screws).
5. Remove the transport guide plate (2 screws). (See "Transport Belt Replacement" section.)
6. Remove the exit sensor (1 screw, 1 connector and 2 clamps).



5-6. Corona

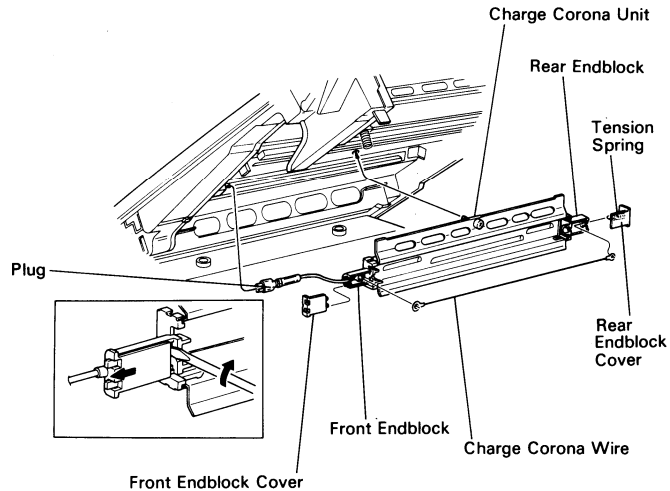
Charge Corona Wire Replacement 5-34

Transfer Corona Wire Replacement 5-35

Charge Corona Wire Replacement

1. Open the clamshell and remove the master unit. (See "Erase Lamp Replacement" section.)
2. Remove the charge corona unit (1 screw and 1 plug).
3. Remove the front endblock cover by sliding gently.
4. Remove the rear endblock cover by sliding gently together with the charge corona wire.
5. Remove the charge corona wire from the tension spring and front endblock.

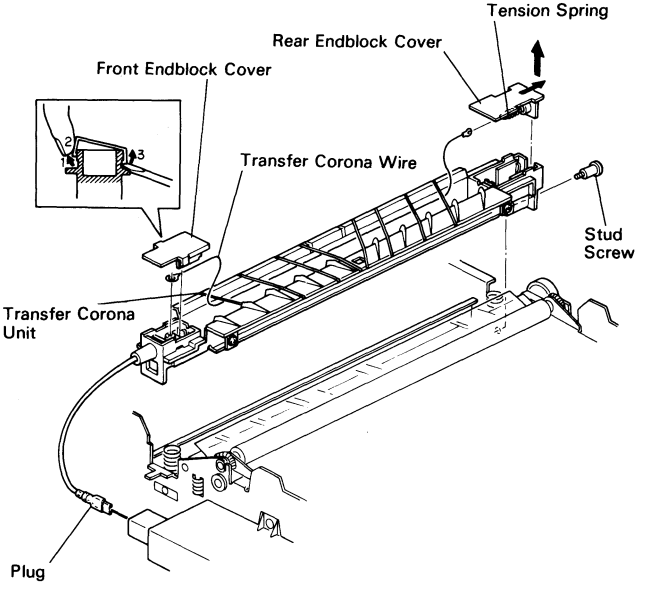
NOTE: * Check the action of the tension spring after installation.



Transfer Corona Wire Replacement

1. Open the clamshell and remove both the lower rear cover and front cover.
2. Remove the transfer corona unit (1 stud screw and 1 plug).
3. Remove the front endblock cover gently.
4. Slide the rear endblock cover to the rear and then remove it together with the transfer corona wire.
5. Remove the transfer corona wire from the tension spring.

NOTE: * Check the action of the tension spring after installation.



5-7. Copy Image

FT2050

Auto ID Sensor Adjustment 5-38

Leading Edge Registration Adjustment 5-39

FT2070

Light Intensity Adjustment 5-40

Auto ID Sensor Adjustment.. 5-40-1

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Uneven image Density Adjustment 5-40-4

Horizontal Magnification Adjustment 5-40-5

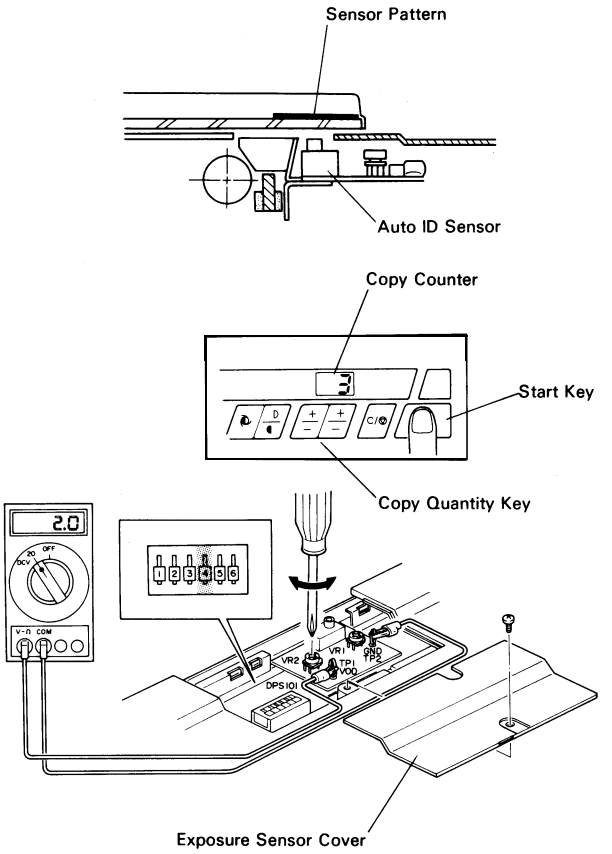
Vertical Magnification Adjustment 5-40-6

Auto ID Sensor Adjustment

1. Turn off the main switch.
2. Remove the master unit. (See "Erase Lamp Replacement" section.)
3. Move the slider to the home position.

NOTE: * When the slider is at the home position, the sensor pattern is just above the auto ID sensor.

4. Remove the exposure sensor cover (1 screw).
5. Turn on DIP SW 4 (test mode).
6. Set meter to 20 Vdc setting.
7. Connect meter leads and V-ohm to TP-2, TP-1.
8. Turn on the main' switch.
9. Press the Copy Quantity key until 3 is displayed in the copy counter.
10. Press the Start key to start the test mode.
11. Adjust the VR2 so that the voltage is 1.7 ± 0.1 V.



Leading Edge Registration Adjustment

1. Lay a ruler on the exposure glass as shown in the figure.

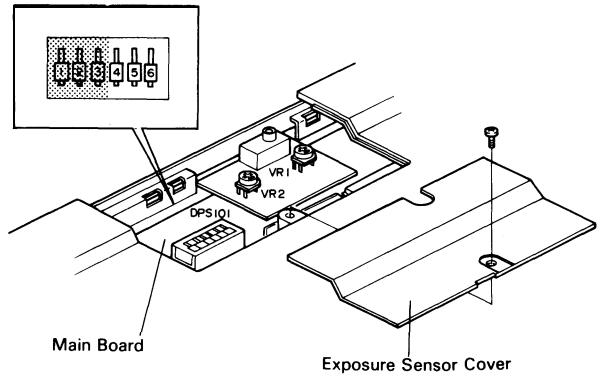
2. Make a few copies and check that the leading edge registration is within specifications.

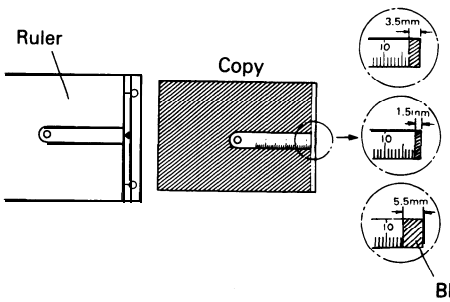
   Leading Edge Registration Specifications.
   0 ± 2.0 mm (0 ± 0.08")

   [Blank Leading Edge 3.5 ± 3.0 mm (0.14 ± 0.12")]

3. If it is out of the specifications adjust it using DIP SW 1, 2, and 3 on the main board.

NOTE: * When adjusting the leading edge registration, move the slider to the home position and remove the exposure cover (1 screw).





Leading Edge Registration
± 0mm

Leading Edge Registration
−2.0mm(−0.08")

Leading Edge Registration
+2.0mm(+0.08")

— Leading Edge Registration —

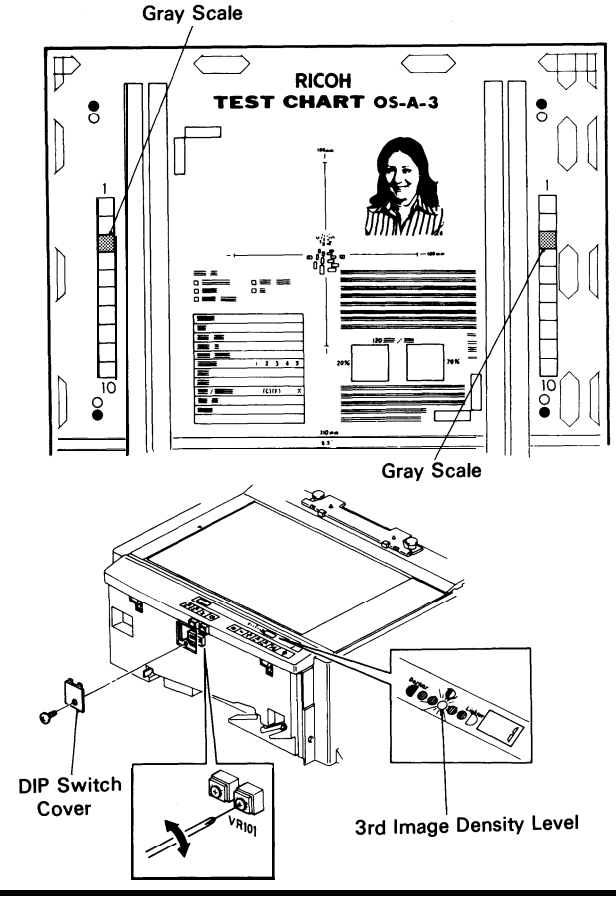
1 : SW ON 0 : SW OFF

No.1	No.2	NO.3	Registration
0	0	0	Decrease (–)
1	0	0	
0	1	0	
1	1	0	Variation per step: Approx. 1.3mm (0.051")
0	0	1	
1	0	1	
0	1	1	
1	1	1	Increase (+)

Light Intensity Adjustment (FT2070)

NOTE: * When the copier is set at the 3rd image density level, level 3 of the gray scale on the OS-A3 chart should be slightly visible and level 2 should be invisible on the copy. If the light intensity is not proper, adjust it as follows:

1. Turn off the main switch.
2. After removing the upper right cover, upper left cover, 3rd mirror cover and master unit, clean the optics (mirrors, lens, reflectors, and exposure glass).
3. Reassemble.
4. Open the front cover and remove the DIP switch cover (1 screw).
5. Close the front cover and turn on the main switch.
6. Select the 3rd image density level.
7. Make a few copies of the OS-A3 chart.
8. Adjust the light intensity by rotating VR101 so that level 3 of the gray scale on the OS-A3 chart is slightly visible on the copy.



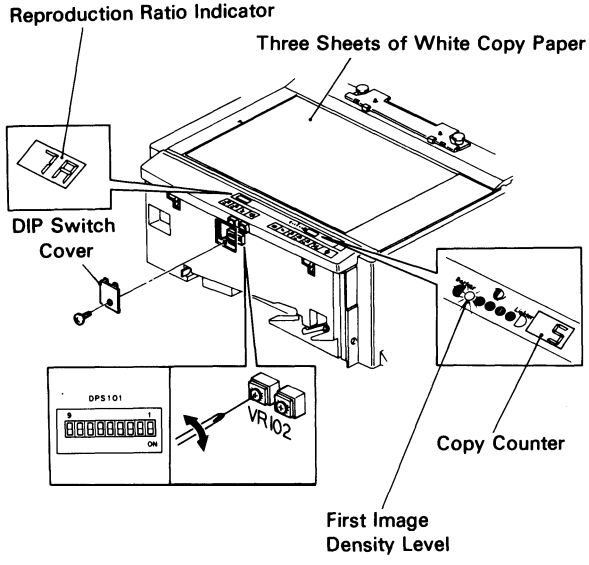
Auto ID Sensor Adjustment (FT2070)

1. Adjust the light intensity first. (See "Light Intensity Adjustment" section.)
2. Turn off the main switch.
3. Lay three sheets of white copy paper on the exposure glass and turn on DIP switch 101-4 (Test Mode) on the main board.
4. Close the front cover, turn on the main switch.
5. Press the Copy Quantity key until 5 is displayed in the Copy Counter.
6. Press the Start key.

NOTE: * Confirm that the first image density level is selected automatically.

7. Wait for a few seconds until the light intensity is stable.
8. Adjust VR102 until a hexadecimal number (base 16) between 7A and 7F is displayed in the Reproduction Ratio indicator.

NOTE: * Do this adjustment as quickly as possible. If it takes over one minute to adjust, the thermoswitch opens.



Leading Edge Registration Adjustment (FT2070)

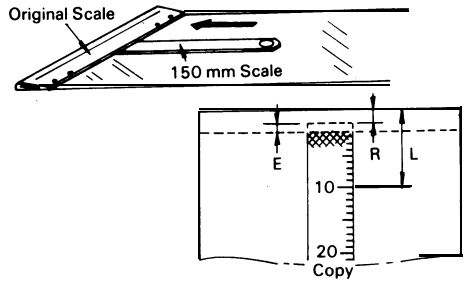
1. Lay a scale on the exposure glass, aligning it with the original scale as shown to the right.

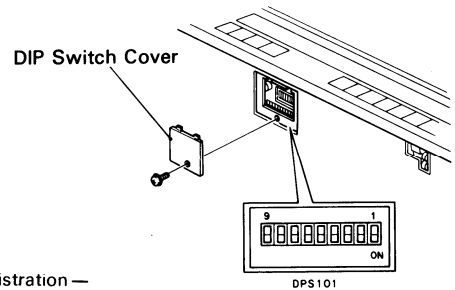
2. Make a few copies and check that the leading edge registration is within specification.

   Leading Edge Registration Specification: O ± 2.0 mm (0 ± 0.08")

NOTE: * Leading edge registration is the distance "R".
R =L - 10mm (L-0.4")
L : Distance between the edge of the paper and the 10 mm (0.4") mark on the scale.

3. If the registration is out of specification, remove the DIP switch cover (1 screw) and adjust it using DIP SW 101-1, 2 and 3 on the main board.





— Leading Edge Registration —

1 : SW ON O : SW OFF

No.1	No.2	NO.3	Registration
O	O	O	Decrease (–)
1	O	O	
O	1	O	
1	1	O	Variation per step: Approx. 1.3mm (0.051")
O	O	1	
1	O	1	
O	1	1	
1	1	1	Increase (+)

Leading Edge Erase Adjustment (FT2070)

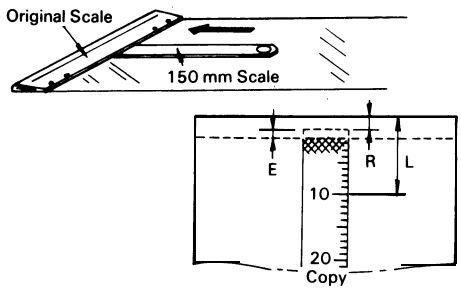
1. **Lay a scale on the exposure glass, aligning it with the original scale as shown to the right.**

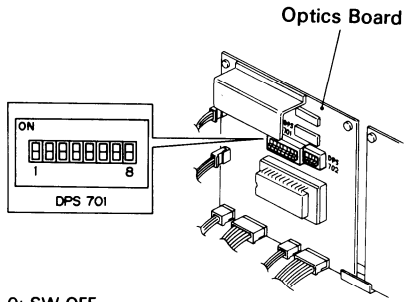
2. **Make a few copies and check that the leading edge erase is within specification.**

   Leading Edge Erase Specification
   3.5 ± 1 mm (0.14 ± 0.04")

NOTE: * Leading edge erase is the distance "E" in the figure (the length of scale that has been erased).

3. **If the leading edge erase is out of specification, adjust it using DIP SW 701-2, 3 and 4 on the optics board.**





1: SW ON 0: SW OFF

No. 2	No. 3	No. 4	Erase
0	0	0	Decrease (–)
0	0	1	
0	1	0	Variation
0	1	1	per step:
1	0	0	Approx. 0.8 mm
1	0	1	(0.032")
1	1	0	
1	1	1	Increase (+)

Uneven Image Density Adjustment (FT2070)

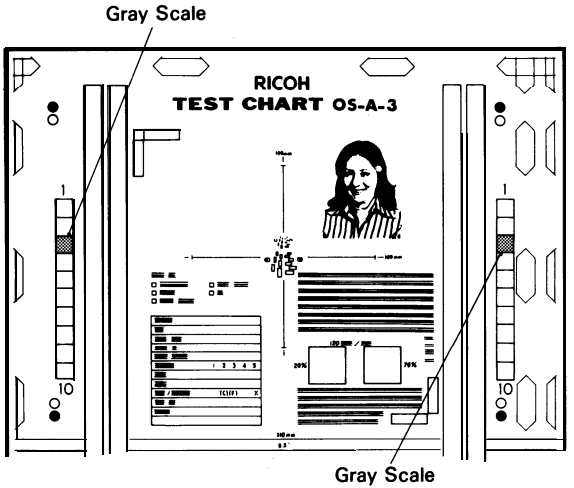
1. **Adjust the exposure lamp position. (See "Exposure Lamp Positioning" section.)**

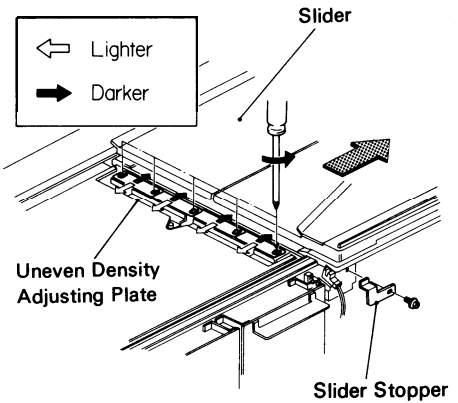
2. **Make a few copies of the OS-A3 chart and check that the difference in the image density between both sides is within specification.**

   Side-to-side Image Density Specification: Within one level difference between the two gray scales on the OS-A3 chart.

3. **If side-to-side image density is out of specification, adjust it using the uneven density adjusting plate.**

NOTE: * When adjusting the uneven density adjusting plate, remove the upper rear cover and the slider stopper (1 screw), then move the slider fully to the left.





Horizontal Magnification Adjustment (FT2070)

– Resolution Adjustment –

1. **Make a few copies of the OS-A3 chart using the 1:1 reproduction ratio and check the resolution.**
2. **If the resolution is poor, adjust it by rotating the resolution cam to achieve optimum image.**

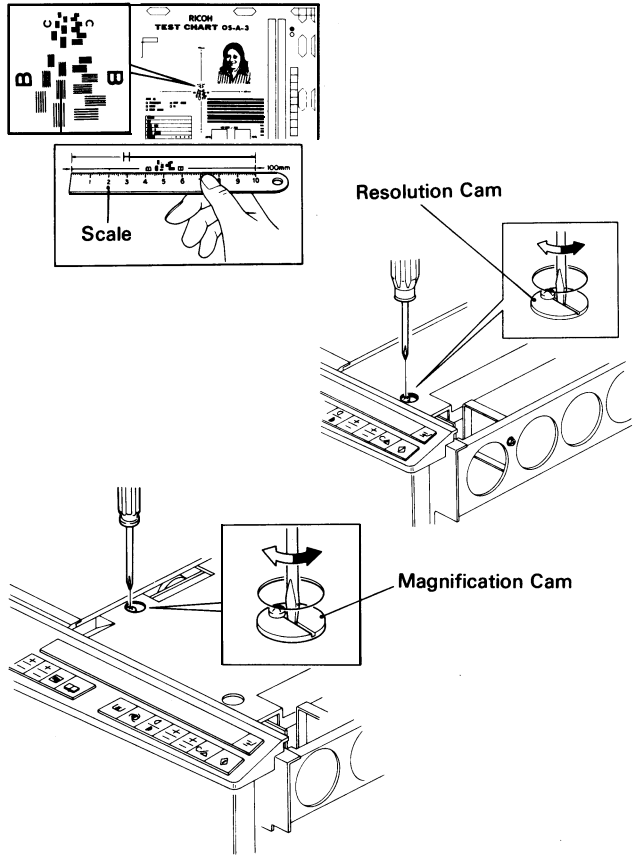
– Horizontal Magnification Adjustment –

3. **Make a few copies of the OS-A3 chart using the 1 :1 reproduction ratio and check that the horizontal magnification is within specification.**

   Horizontal Magnification Specification: ± 0.5%

NOTE: * The distance "H" on the copy of the OS-A3 chart should be 10030.5 mm (4 ± 0.02").

4. **If the horizontal magnification is out of specification, adjust it using the magnification cam.**



Vertical Magnification Adjustment (FT2070)

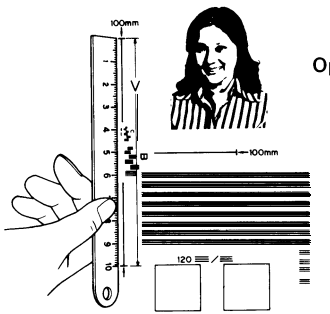
1. **Make a few copies of OS-A3 chart using the 1 : 1 reproduction ratio and check that the vertical magnification is within specification.**

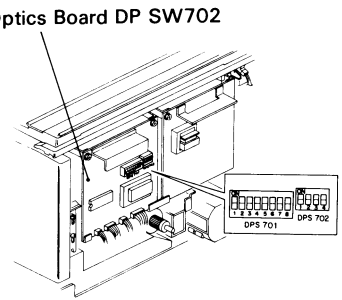
   Vertical Magnification Specification: ± 1%

NOTE: * The distance "V" on the copy of the OS-A3 chart copy should be 100 ± 1 mm (4 ± 0.004").

2. **If Horizontal magnification is out of specification, adjust it using DIP SW 701-5, 6, 7, 8 (fine adjustment) and DIP SW 702-1, 2, 3, 4 (rough adjustment) on the optics board.**

RICOH
CHART OS-A-3





DIP SW 701

1: SW ON 0: SW OFF (Fine Adjustment)

5	6	7	8	
0	0	0	0	Slower (Larger)
0	0	0	1	
0	0	1	0	
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	Variation
0	1	1	1	per step:
1	0	0	0	Approx. 0.2%
1	0	0	1	
1	0	1	0	
1	0	1	1	
1	1	0	0	
1	1	0	1	
1	1	1	0	
1	1	1	1	Faster (Smaller)

DIP SW 702

1: ON 0: OFF (Rough Adjustment)

1	2	3	4	
0	0	1	1	Slower (Larger)
0	0	1	0	
0	0	0	0	Variation per step: Approx. 1.4%
0	1	0	0	
1	0	0	0	Faster (Smaller)

5-8. Others

Master Clutch Lubrication (FT2050). 5-42

Slider Drive Assembly Removal (FT2050) 5-43

50Hz/60Hz Conversion 5-44

Master Clutch Lubrication (FT2070) 5-45

Master Drive Assembly Replacement (FT2070) 5-47

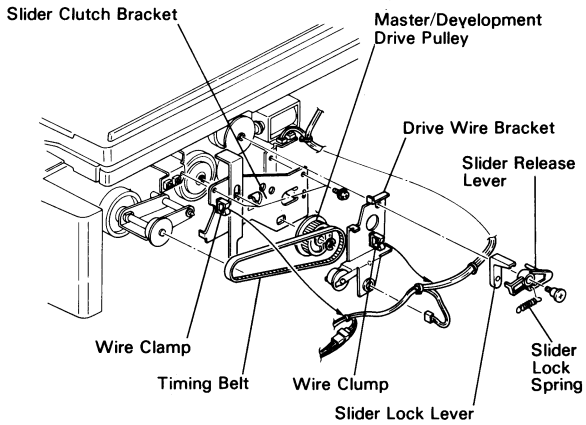
Toner Overflow Sensor Replacement (FT2070) 5-48

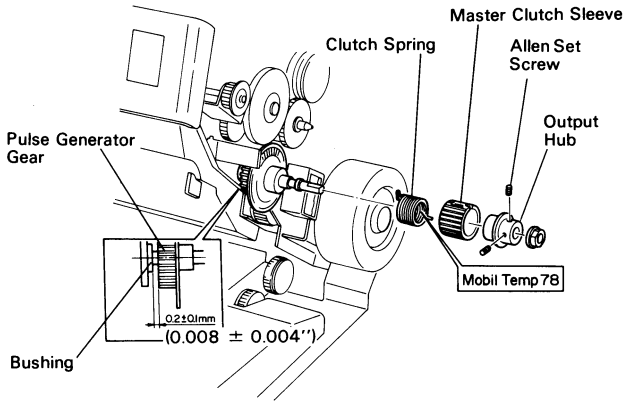
Master Clutch Lubrication

1. Remove the slider clutch bracket. (See "Slider Clutch Removal" section.)
2. Remove the 2 allen set screws from the master clutch.
3. Rotate the output hub counterclockwise and remove.

NOTE: * Do not pull the hub straight out or else damage to the spring may occur.

4. Remove the master clutch sleeve.
5. Rotate the clutch spring counterclockwise and remove.
6. Apply Mobil Temp 78 to the clutch.
7. Re-install the clutch so that the radial end of the spring and the smooth side of the clutch sleeve are facing the pulse generator gear.
8. Position a 0.2 mm (0.008") thickness gauge in between the pulse generator gear and bushing.
9. Push the master clutch towards the pulse generator gear. Tighten both allen set screws.





Slider Drive Assembly Removal

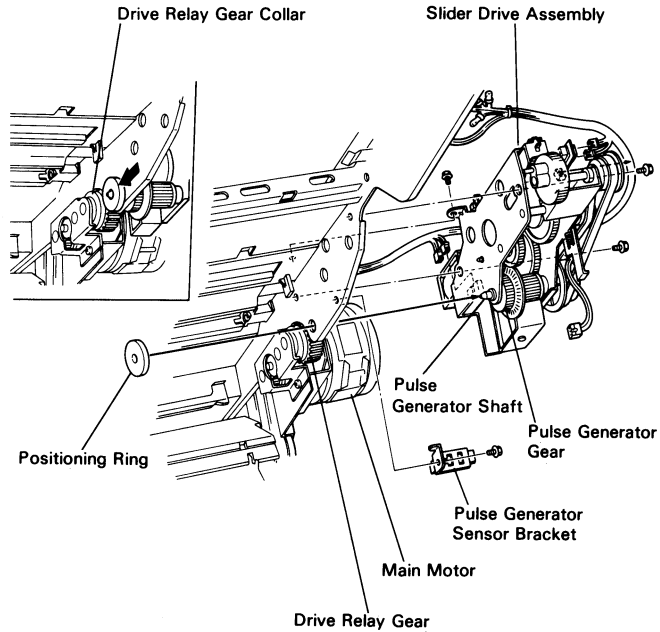
1. **Remove the Slider.** (See **"Slider Removal" section.)**
2. **Remove the pulse generator sensor bracket (1 screw and 1 connector).**
3. **Open the clamshell and remove the master unit. (See''Erase Lamp Replacement" section.)**
4. **Remove the slider drive assembly (3 screws, 5 connectors).**

NOTE: * When re-installing the slider drive assembly, set the positioning ring so it contacts the drive relay gear collar.

– Slider Drive Assembly Positioning –

When re-installing the slider drive assembly, the following positioning is necessary.

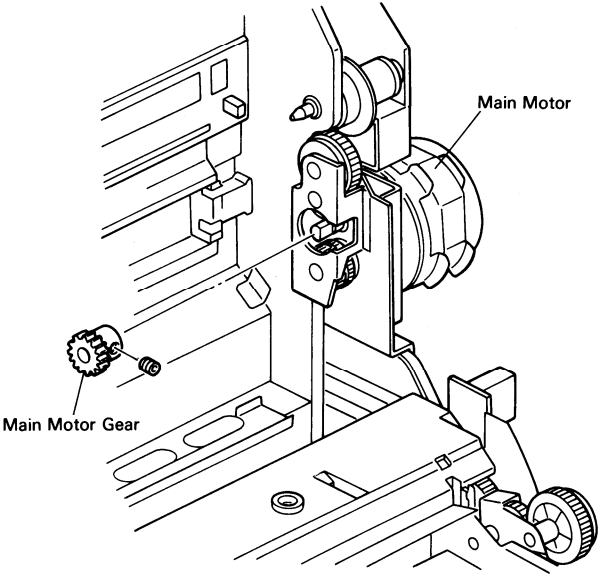
1. **Place the positioning ring (part number 52169003) on the pulse generator shaft.**
2. **Apply pressure to the slider drive assembly forcing it in the direction of the main motor, then tighten the screws. (This is to make sure that the drive relay gear collar and the positioning ring are firmly in contact.)**

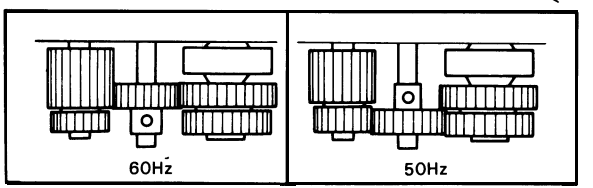


50Hz/60Hz Conversion

1. **Remove the 2 clamshell stopper screws and stand the clamshell straight up. (See "Transport Belt Replacement" section.)**

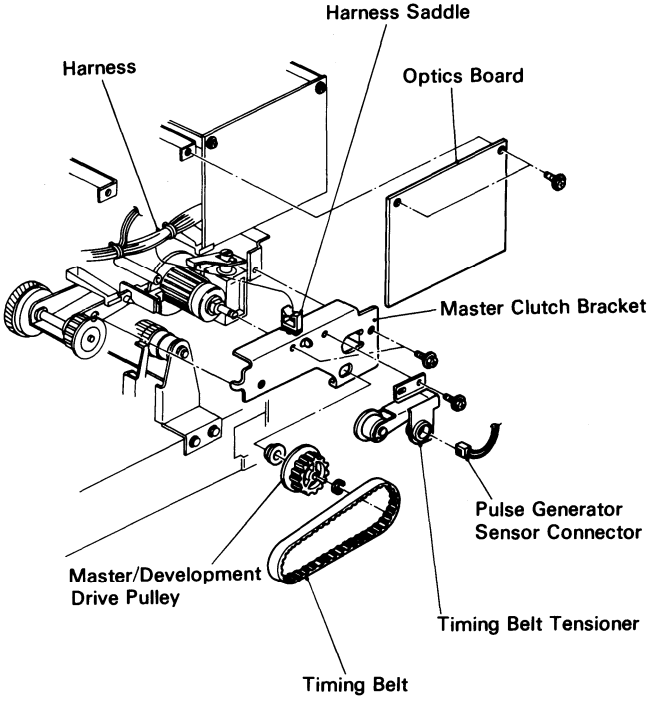
2. **Remove the main motor gear (part no. 52165860: 50Hz or 52165861: 60 Hz) (1 allen set screw) and set according to the desired electrical frequency as shown to the right.**





Master Clutch Lubrication (FT2070)

1. Remove the upper rear cover.
2. Open the clamshell.
3. Remove the optics board (2 screws and 6 connectors).
4. Remove the harness from the harness clamp.
5. Remove the pulse generator sensor connector.
6. Remove the timing belt tensioner (1 screw) and the timing belt.
7. Remove the master/development drive pulley (1 E-ring).
8. Remove the master clutch bracket (2 screws).
9. Remove the 2 Allen set screws from the master clutch.
10. Rotate the output hub counterclockwise and



11. **Remove the master clutch sleeve.**

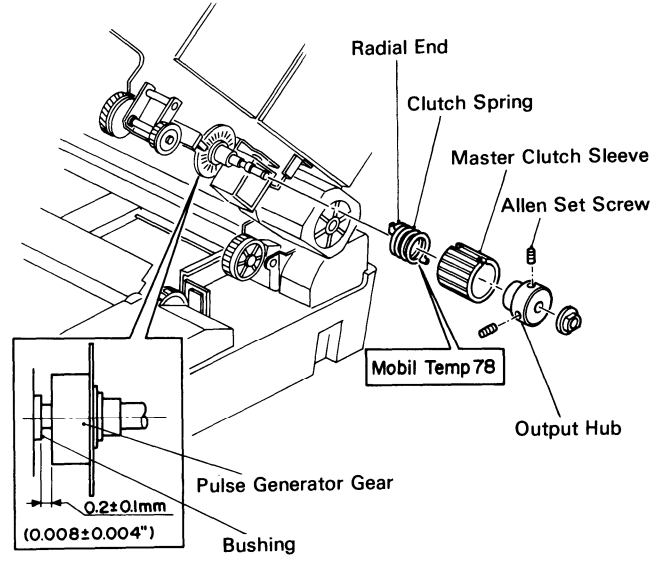
12. **Rotate the clutch spring counterclockwise and remove.**

13. **Apply Mobil Temp 78 to the clutch.**

14. **Re-install the clutch so that the radial end of the spring and the smooth side of the clutch sleeve are facing the pulse generator gear.**

15. **Position a 0.2 mm (0.008") thickness gauge between the pulse generator gear and bushing.**

16. **Push the master clutch towards the pulse generator gear. Tighten both Allen set screws.**



Master Drive Assembly Replacement (FT2070)

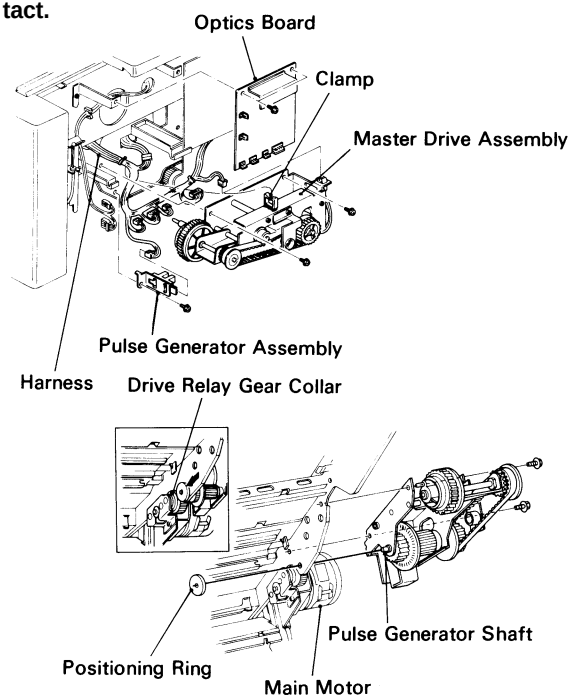
– Master Drive Assembly Removal –

1. Remove the upper rear cover.
2. Open the clamshell and remove the master unit. (See "Erase Lamp Replacement" section.)
3. Remove the optics board (2 screws and 6 connectors). (See "Master Clutch Lubrication" section.)
4. Remove the harness from the harness clamp.
5. Remove the pulse generator sensor assembly (1 screw and 1 connector).
6. Remove the master drive assembly (2 screws and 1 connector).

– Master Drive Assembly Positioning –

When reinstalling the master drive assembly, the following procedure is necessary:

7. Place the positioning ring (part number 52169003) on the pulse generator shaft.
8. Apply pressure to the slider drive assembly forcing it in the direction of the main motor, then tighten the screws.
   This is-to make sure that the drive relay gear collar and the positioning ring firmly in contact.

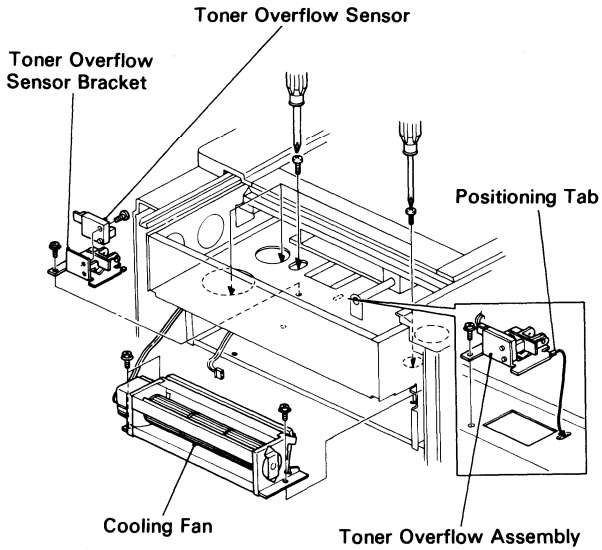


Toner Overflow Sensor Replacement (FT2070)

NOTE: * Make sure that the copier is in the full size mode (1 : 1) before starting the following procedure.

1. **Remove the upper left cover and the upper rear cover.**
2. **Remove the cooling fan (3 screws and 1 connector).**
3. **Remove the toner overflow sensor assembly (1 screw and 1 connector).**
4. **Remove the toner overflow sensor from the bracket (1 screw).**

NOTE: * When installing the toner overflow assembly, make sure that the positioning tab is seated correctly.

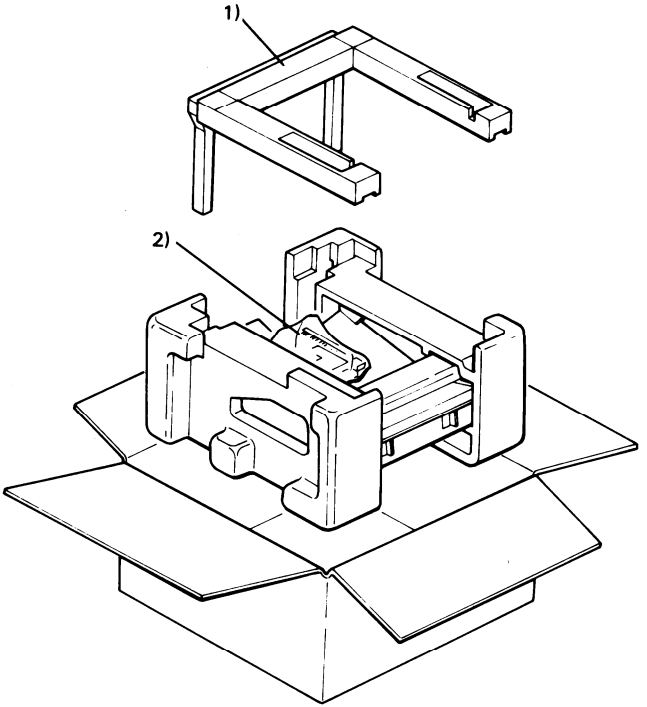


SECTION 6

SORTER CS1040

6-1. Unpacking Procedure

1. Open the shipping box.
2. Take out the mounting base; then, take out the sorter together with the cushion blocks.
3. Take off the cushion blocks and take the sorter out of the plastic bag.

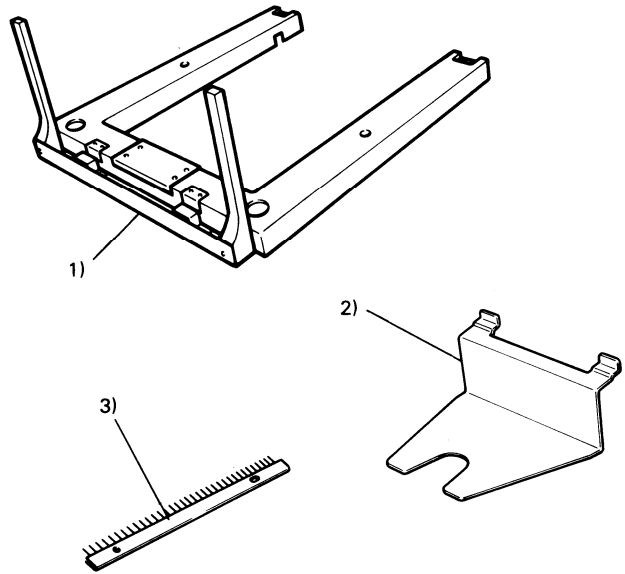


1) Mounting Base
2) Accessories

6-2. Accessory Check

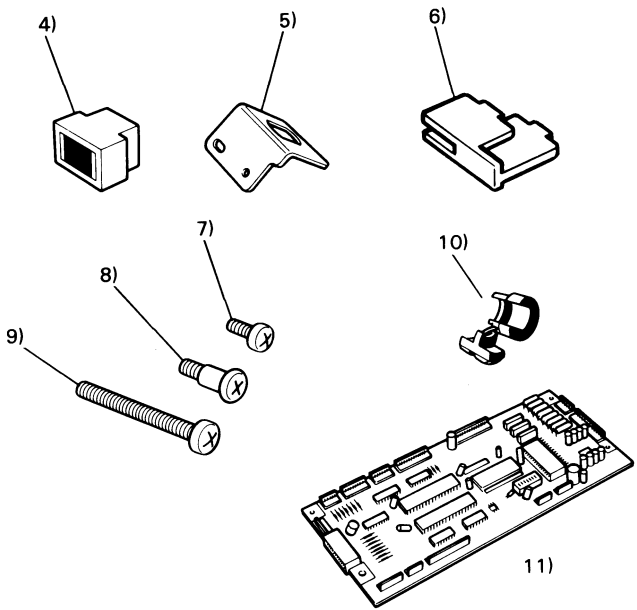
Check the quantity and condition of the accessories in the box according to the New Equipment Condition Report.

1. **Mounting Base 1pc**
2. **Proof Tray 1pc**
3. **Antistatic Brush . . . . . 1 pc**
4. **Magnet 1pc**
5. **Harness Bracket . . . . . 1 pc**
6. **Mounting Lock 2pcs**
7. **Short Screw . . . . . 3 pcs**
   (Incl.1 Grounding Screw)
8. **Stepped Screw 1pc**
9. **Long Screw 2pcs**
   (Not used)
10. **Bushing 1pc**



NOTE: To install the sorter on the FT2050 a sorter compatible main board must be obtained. These are available as options.

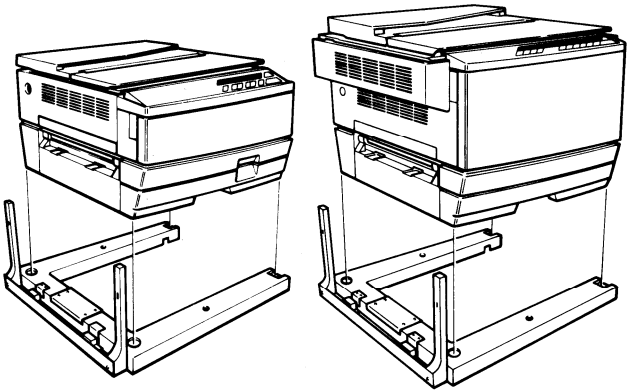
11) Interface Board Type C



6-3. Installation procedure

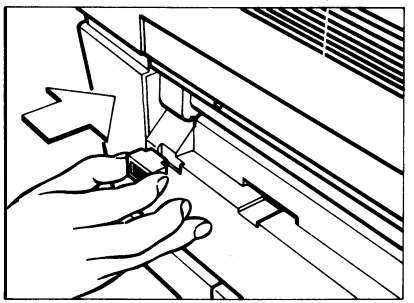
1. Install the copier on the mounting base.

   NOTE: Make sure that the legs rest securely in the cutouts of the mounting base.

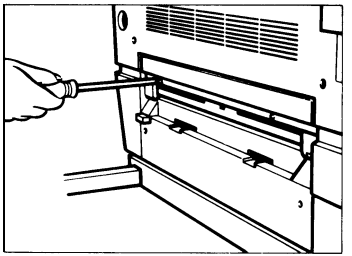


2. Install the magnet on the left cover as shown.

   NOTE: Place the magnet in the bottom right-hand corner of the cutout.

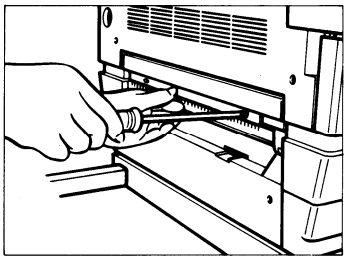


3. Remove the two screws on the exit cover.

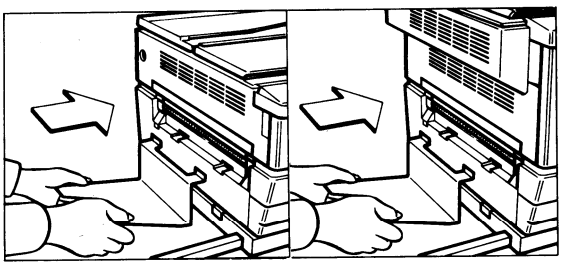


4. Install the antistatic brush.

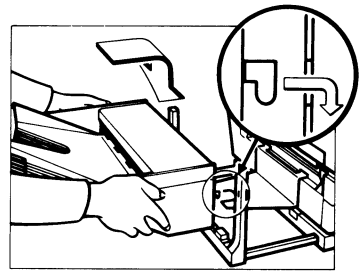
NOTE: Use a screw from step 3 in the left side and the accessory stepped screw in the right side.



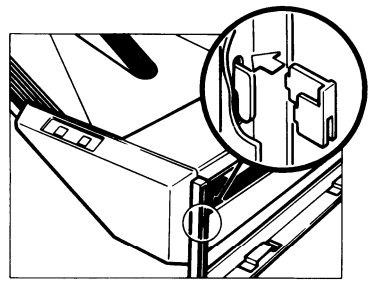
5. Install the proof tray where the copy tray normally fits.



6. Insert the sorter hooks into the vertical posts of the mounting base.

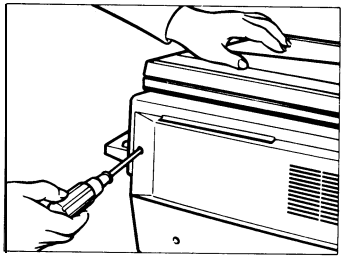


7. Secure the sorter hooks by installing the mounting locks.

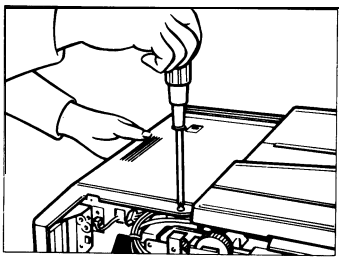


Separate procedures are needed to install the sorter on the FT2050 and the FT2070. Follow the procedure from step 8 when installing the sorter on the FT2050. Proceed to step 21 when installing the sorter on the FT2070.

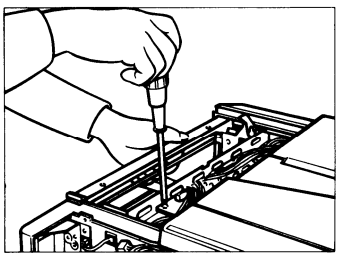
8. Remove the rear cover (2 screws)



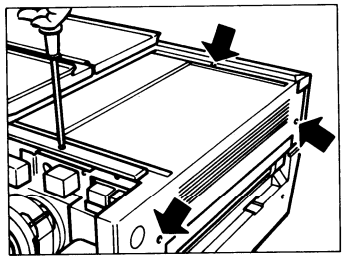
9. Move the slider to the left by pressing the slider lock release lever. Then, lower the



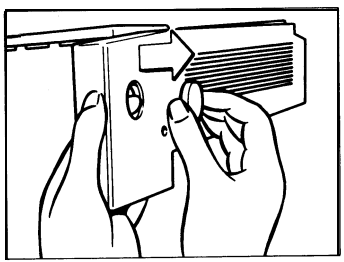
10. Replace the main board with the sorter compatible main board (3 screws and 8 connectors).



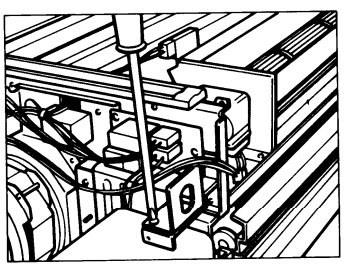
11. Remove the upper left cover (4 screws).



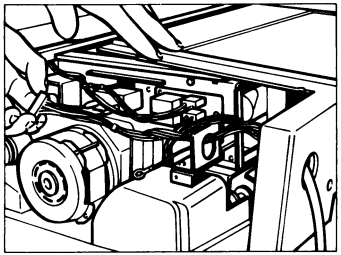
12. Remove the plastic cap from the docking hole of the upper left cover.



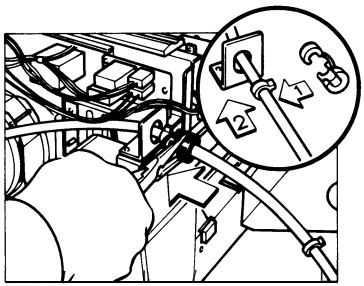
13. Install the harness bracket (2 screws).



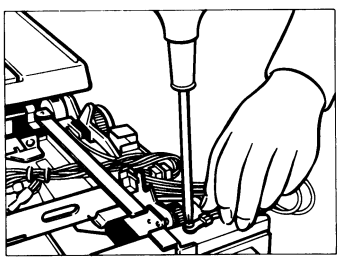
14. Thread the sorter harness through the docking hole and the harness bracket.



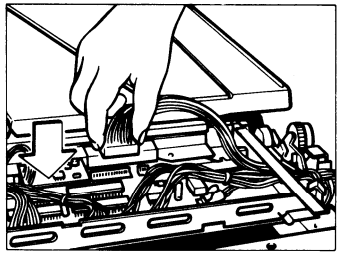
15. The sorter harness has two harness bands used as markers. Place the bushing on the sorter harness just behind the first harness band from the connector. Secure the bushing in the harness bracket.



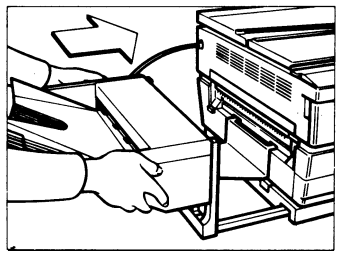
16. Secure both ground wires to the rear cover bracket(1screw).



17. Couple the connector to CN114 on the main board.

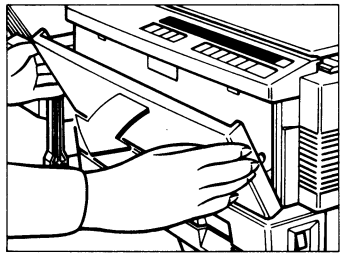


18. Reassemble the copier.
19. Slide the sorter to its normal position.

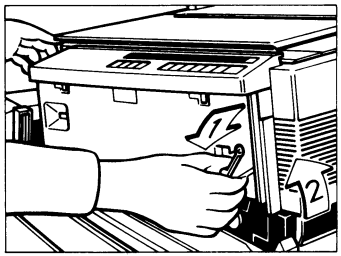


20. Check the operation in all modes.
    This completes the sorter installation on the FT2050

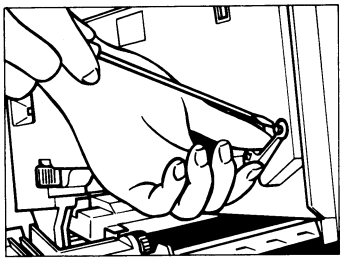
21. Open the front cover.



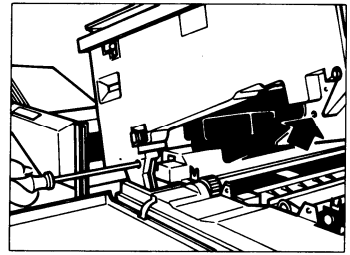
22. Move the slider to the center and push down the release lever to open the top unit.



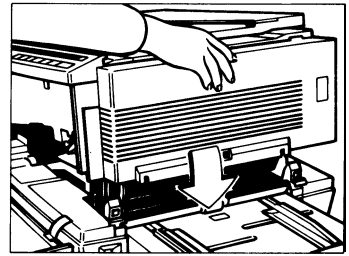
23. Remove the release lever (1 E-ring).



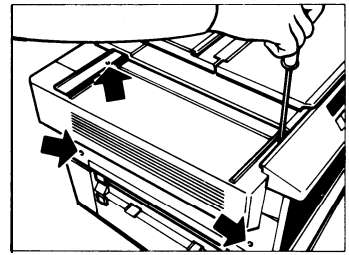
24. Remove the inner cover (2 screws).



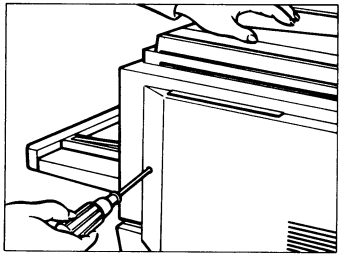
25. Lower the top unit.



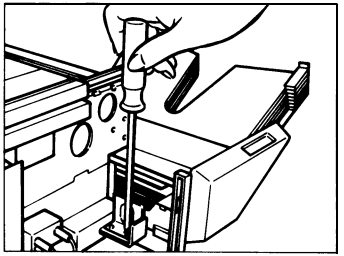
26. Move the slider fully to the right, then remove the upper left cover (4 screws).



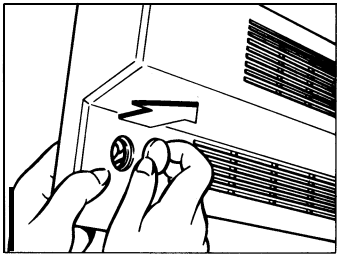
27. Remove the rear cover (2 screws).



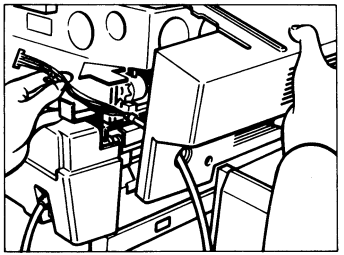
28. Install the harness bracket (2 screws).



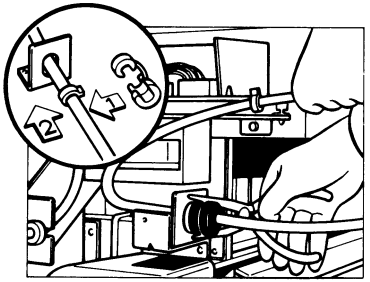
29. Remove the plastic cap from the docking hole of the upper left cover.



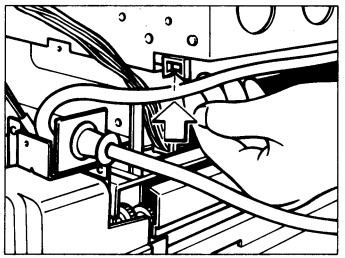
30. Thread the sorter harness through the docking hole and the harness bracket.



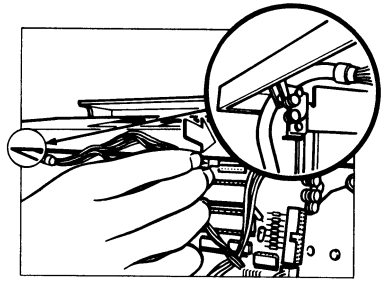
31. The sorter harness has two harness bands used as markers. Place the bushing on the sorter harness just behind the second harness band from the connector. Secure the bushing in the harness bracket.



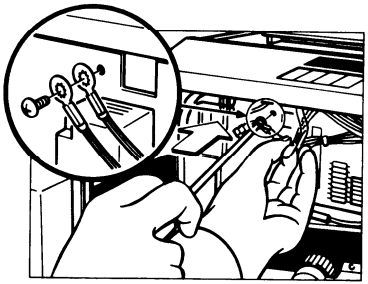
32. Secure the sorter harness into the three wire saddles which are mounted on the left underside of the optics unit.



33. Run the sorter harness above the total counter bracket, and couple the connector to CN114 on the main board.



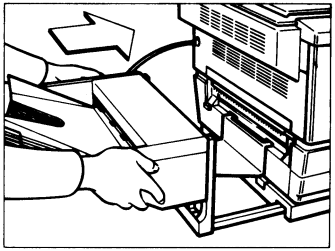
34. Secure the ground wire to the front machine plate.



35. Reassemble the copier.

36. Slide the sorter to its normal position.

37. Check the operation in all modes.
This completes the sorter installation on the FT2070.

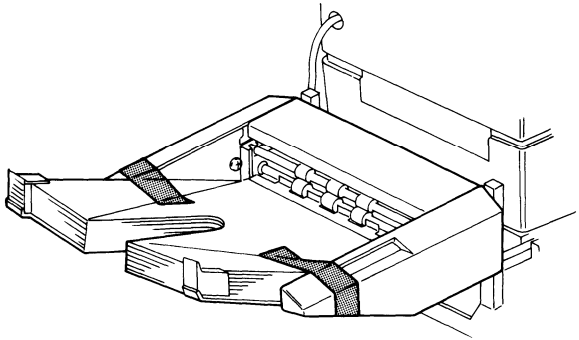


6-4. Preparation for Transporting the Sorter

Before moving the sorter from its place of installation, be sure to prepare it for transportation as follows. The sorter may be badly damaged if it is moved without proper preparation.

1. **If the bins are not at the home position, turn on the main switch of the copier to move the bins to the home position.**
2. **Secure the bins with strips of tape as shown to the right.**
3. **Remove the sorter from the copier. (Refer to the "installation Procedure (Sorter)" Section.)**

CAUTION: * When removing and transporting the sorter, be careful not to incline it to prevent the bins from being dislocated.



6-5. Roller Drive Belt Replacement

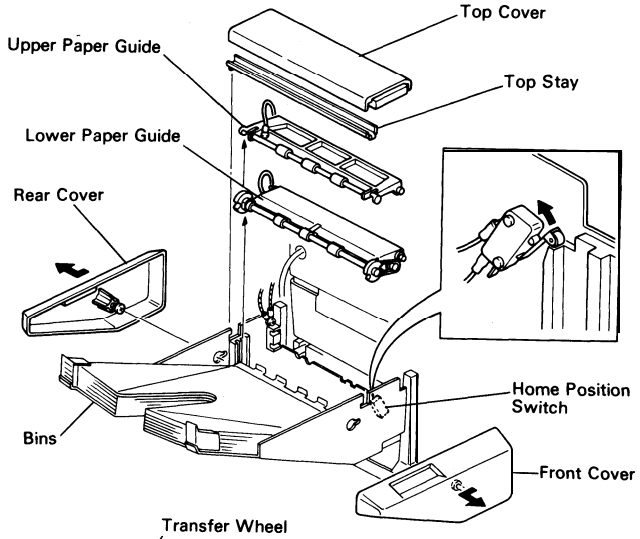
1. Loosen the screws, slide the front and rear covers toward exit end of the sorter, and then remove them.
2. Remove the top cover.
3. Remove the top stay.

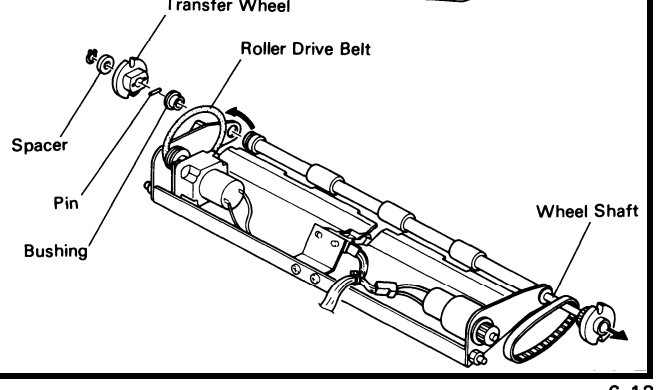
NOTE: * Be sure that the short edge of the top stay is facing the exit side of the sorter when re-installing.

4. Lift the upper paper guide up and out of position.

NOTE: * Be careful not to damage the home position switch actuator when reassembling.

5. Lift the lower paper guide out of position and turn it over to remove the roller drive belt.
6. Remove the transfer wheel, spacer, pin and bushing (1 C-ring).
7. Slide the wheel shaft towards the front and remove the roller drive belt.

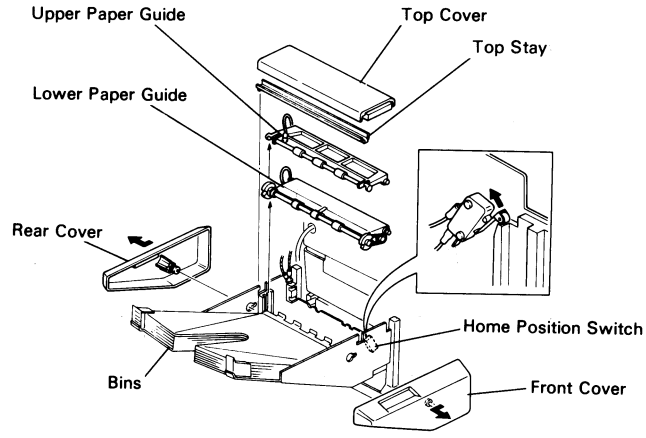


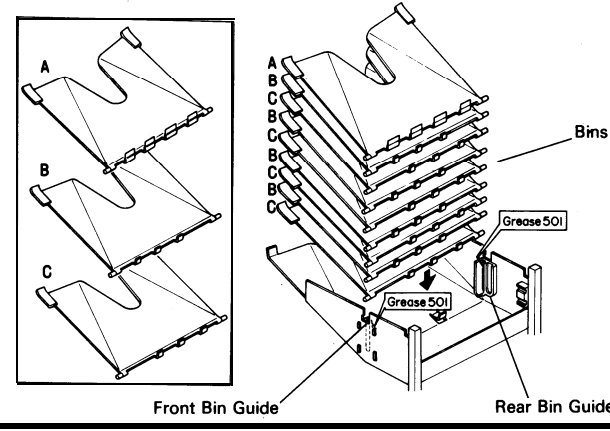


6-6. Bin Guide Lubrication

1. Remove the lower paper guide. (See "Roller Drive Belt Replacement" section.)
2. Remove all bins from the bin guides.
3. Apply Grease 501 to the grooves of the bin guides.

NOTE: * These are three-kinds of bin.
Therefore, when installing the bins, be sure that the bins are installed in the correct order.





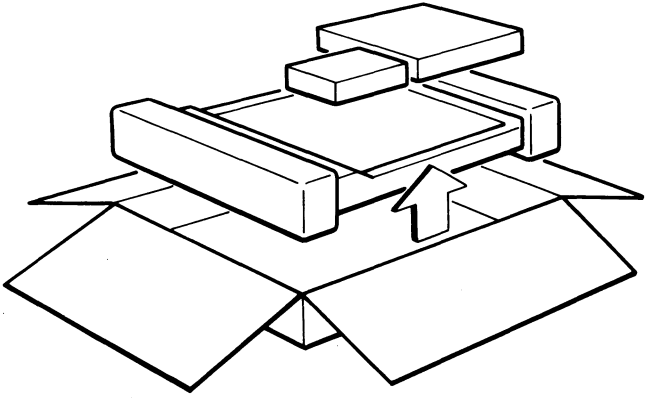
SECTION 7

DOCUMENT FEEDER

DF36

7-1. Unpacking Procedure

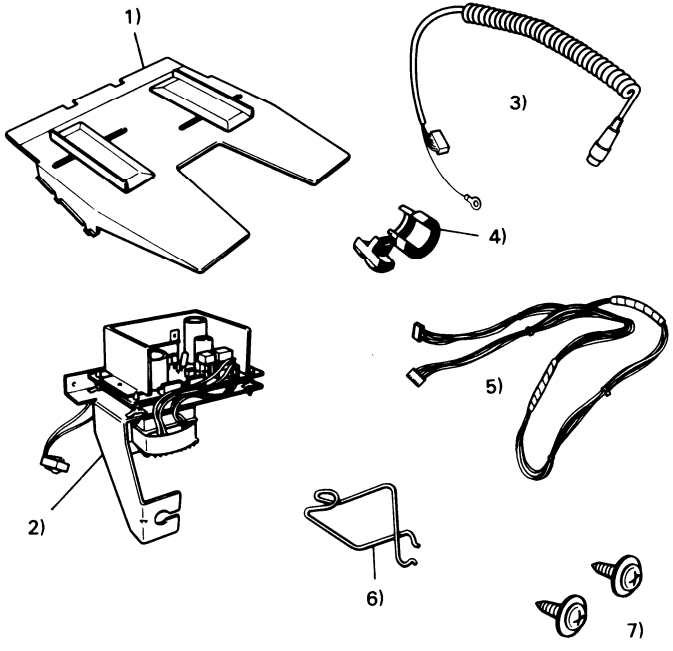
1. **Open the shipping box.**
2. **Take out the accessory boxes and the machine.**
3. **Take off the cushion blocks and take the document feeder out of the plastic bag.**



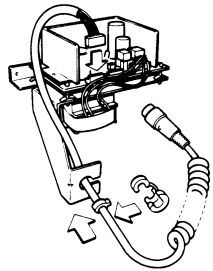
7-2. Accessory Check

Check the quantity and condition of the accessories in the boxes according to the New Equipment Condition Report.

1. **Original Table 1pc**
2. **AC Power Unit . . . . . 1 pc**
3. **Interface Cord . . . . . 1 pc**
4. **Bushing 1pc**
5. **DC Harness . . . . . 1 pc**
6. **Harness Hang Wire 1pc**
7. **Screw . . . . . 2 pcs**



7-3. Installation Procedure



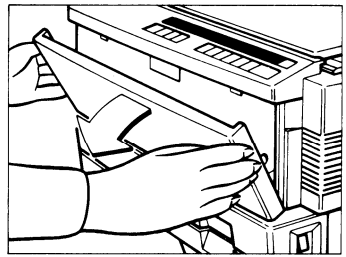
* **Before starting the installation, assemble the ac power unit.**

1) Connect the interface cord to CN110.

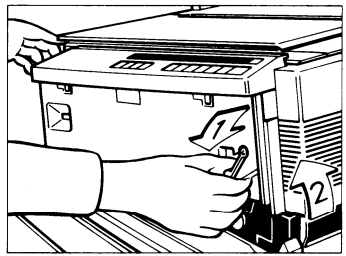
2) Place the bushing on the interface cord just behind the harness band.

3) Secure the bushing in the ac power unit bracket.

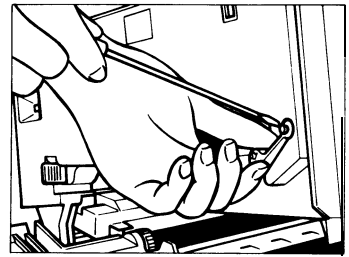
1. Open the front cover.



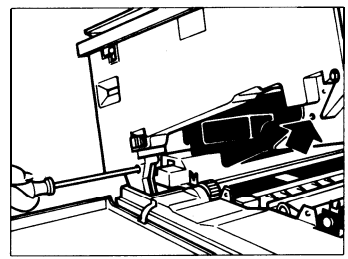
2. Move the slider to the center and push down the release lever to open the top unit.



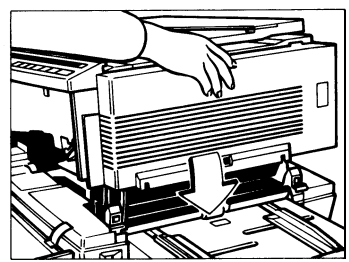
3. Remove the release lever (1E-ring).



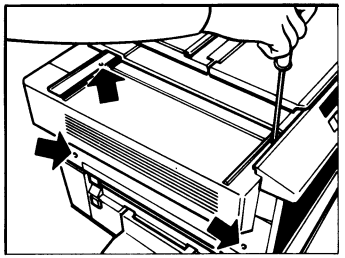
4. **Remove the inner cover (2 screws)**



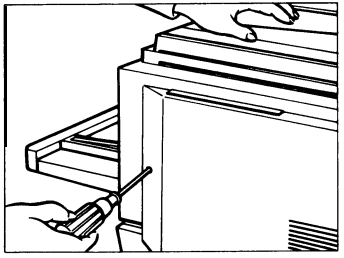
5. Lower the top unit.



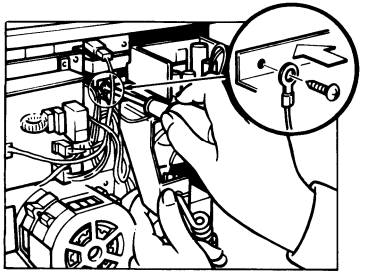
6. **Move the slider fully to the right, then remove the upper left cover (4 screws).**



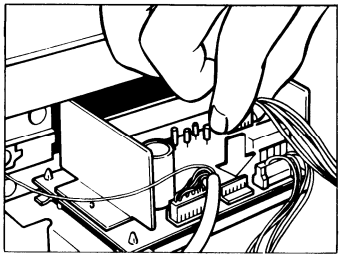
7. **Remove the rear cover (2 screws)**



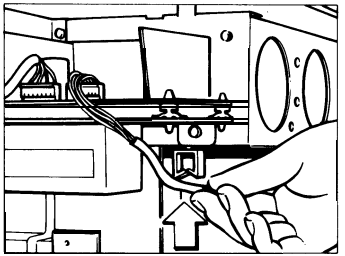
8. **Install the ac power unit and the grounding wire of the interface cord on the machine rear plate (2 screws).**



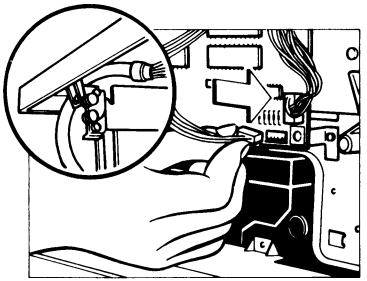
9. Connect the dc harness (red connector) to CN111 of the ac power unit.



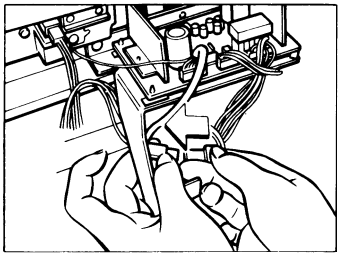
10. Secure the dc harness into the three wire saddles which are mounted on the left underside of the optics unit.



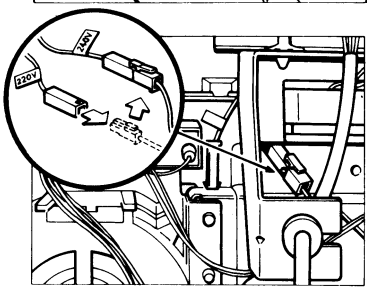
11. Run the dc harness above the total counter bracket, and couple the connector to CN116 on the main board.



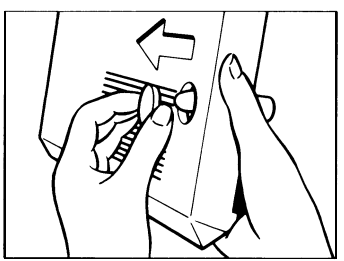
12. Couple the ac connectors.



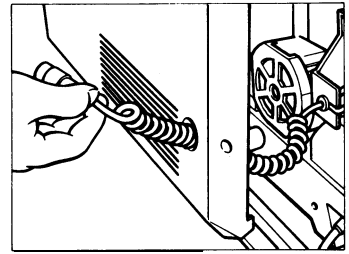
*** In 240V areas, uncouple the 220V connector (red harness) and couple the 240V connector (black harness):**



13. Remove the plastic cap from the docking hole on the rear cover.

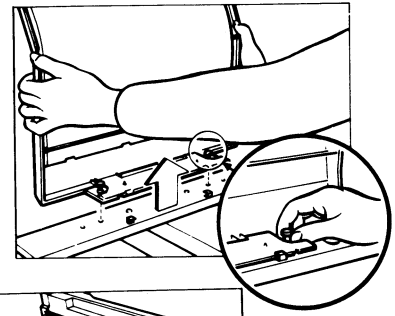


14. **Thread the interface cord through the docking hole.**

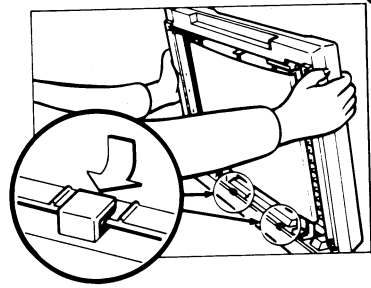


15. Reassemble the copier.

16. Pull out the two push-locks and remove the platen cover.

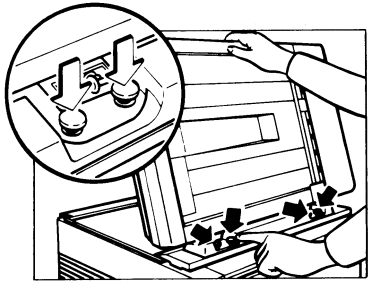


17. **Move the slider to the center of the copier, then mount the document feeder so that each of the two catches on the slider are placed between the positioning ridges on the document feeder.**

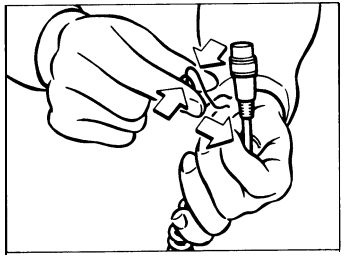


18. HOLDING THE DOCUMENT FEEDER, **press down the four push-locks until they lock.**

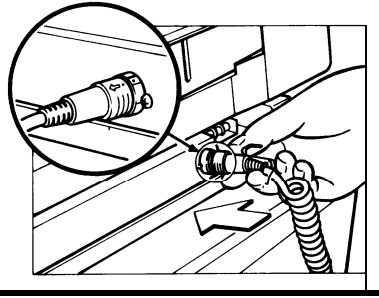
NOTE: **If the push-locks are hard to press down, the document feeder is not positioned correctly. Separate the document feeder, then remount it.**



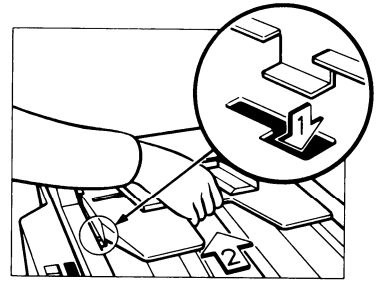
19. Attach the harness hang wire to the interface cord.



20. Connect the interface cord to the document feeder so that the black marks are aligned.



21. Close the document feeder and install the original table.



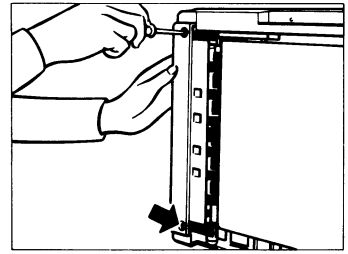
22. Check the feeder operation.

23. Check the feeder registration.
    Registration standard: 0 ± 3 mm

NOTE: The copier registration should have been adjusted to specifications.
Adjustment Standard: 0 ± 2 mm

24. If the feeder registration is out of specification, adjust it as follows:

(1) Turn off the copier main switch and remove the lower left cover of the document feeder (2 screws).

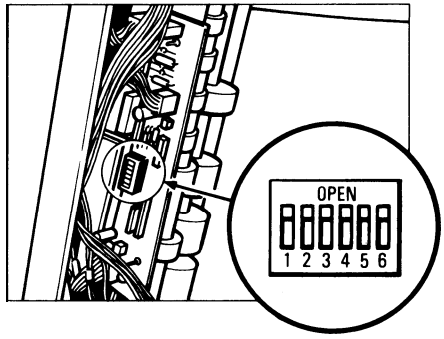


(2) Adjust the registration using DIP switch 101 on the DF main board according to the adjustment table.

NOTE: **When making copies, the lower left cover must be installed.**
Make sure that the DF main board is correctly mounted.

25. This completes the document feeder installation.

1) **Adjustment Table**
2) **Free Run**
3) **1.0 mm/step (0.04"/step)**



1) 2)

3	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	1
4	1	1	0	0	1	1	0	0	0	0	1	1	0	0	1	1
5	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1
6	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0

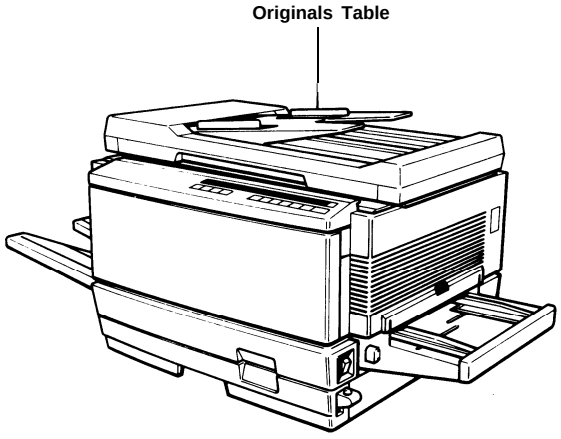
+ ◄——————————————————————► –

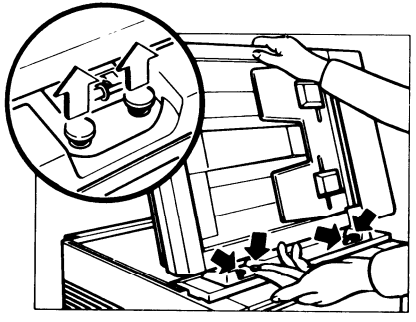
3)

7-4. Preparation for Transporting the Document Feeder

* **Before moving the document feeder from its place of installation, be sure to prepare it for transportation as follows. The document feeder may be badly damaged if it is moved without proper preparation.**

1. **Remove the original table.**
2. **Raise the document feeder to the upright position and remove it from the copier.**
3. **Keep the document feeder flat to prevent it from being deformed.**
4. **Tape the interface cord to the copier.**
5. **Install the platen cover to protect the exposure glass.**

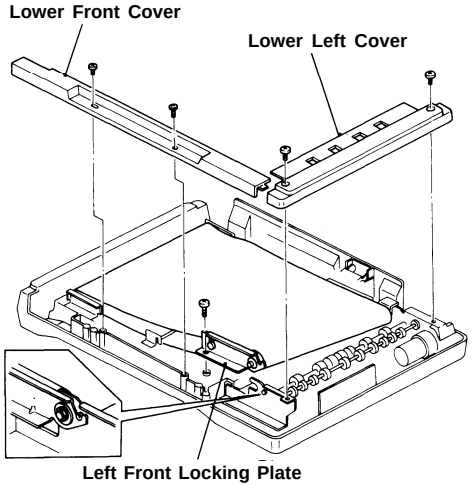


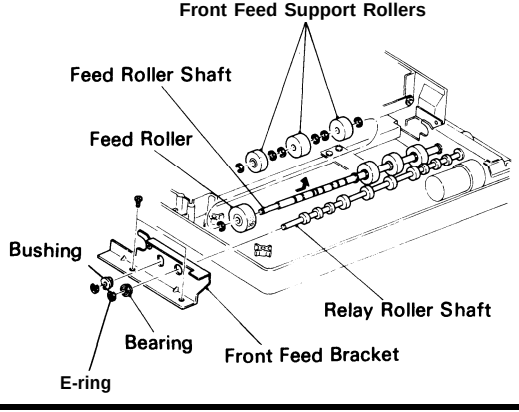


7-5. Feed Roller Replacement

1. **Remove the lower left cover (2 screws) and lower front cover (2 screws).**
2. **Remove the left front locking plate (original feed-in side) (1 screw).**
3. **Remove the front feed bracket (2 screws, bearings, and 2 E-rings).**
4. **Remove the three front feed support rollers, then remove the feed roller (7 E-rings).**

NOTE: * As the feed roller has a one-way clutch, make sure it is installed correctly. When viewing the feed roller from the front, it turns counterclockwise.

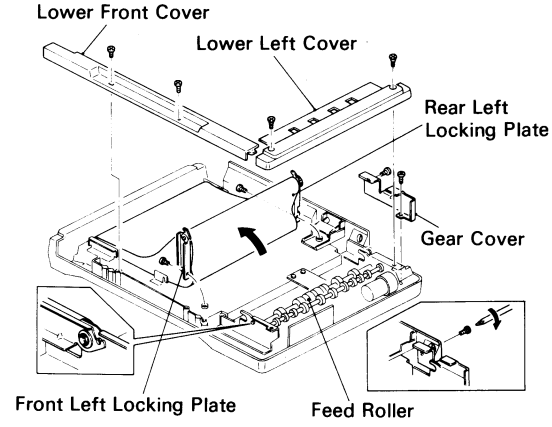


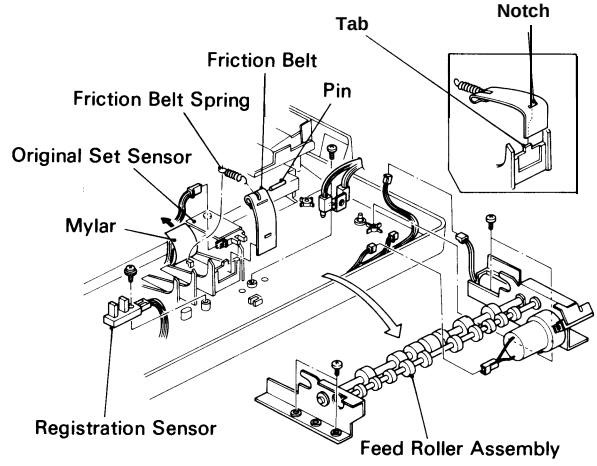


7-6. Friction Belt Replacement

1. **Remove the lower left cover (2 screws) and the lower front cover (2 screws).**
2. **Remove the front left and rear left locking plates (original feed-in side) from the frame (1 screw each) and swing the transport belt up and away from the feed roller.**
3. **Remove the gear cover (2 screws).**
4. **Lift out the feed roller assembly (4 screws and 3 connectors).**
5. **Disconnect the original set sensor.**
6. **Fold back the mylar and disconnect the friction belt spring.**
7. **Peel off the friction belt. When installing the friction belt, make sure that the positioning notch engages with the tab.**
8. **Remove the friction belt spring from the friction belt by sliding the pin for installation on the new belt.**

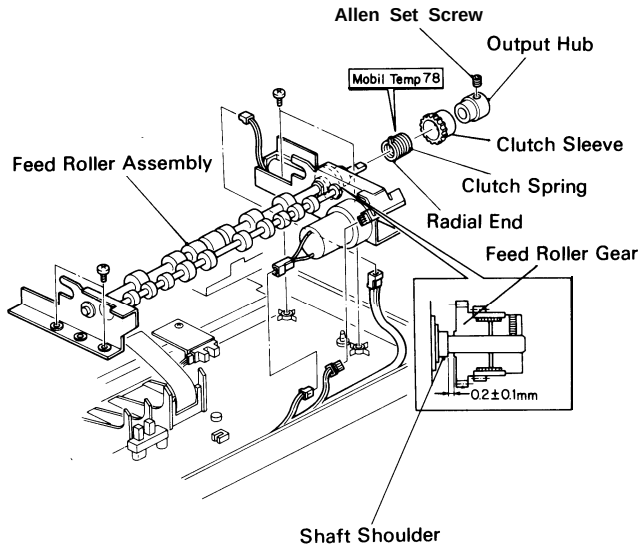
NOTE: * **Be careful not to deform the spring.**





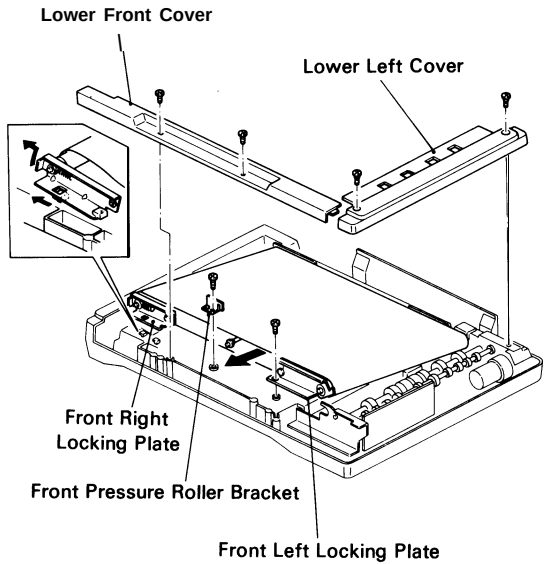
7-7. Feed Clutch Lubrication

1. **Remove the feed roller assembly. (See "Friction Belt Replacement.")**
2. **Remove the output hub (1 Allen set screw), the clutch sleeve, and the clutch spring.**
3. **Apply "Mobil Temp 78" to the clutch spring.**
4. **Re-install the clutch so that the radial end of the spring and the gear side of the clutch sleeve are facing the feed roller gear.**
5. **Position a 0.2 mm thickness gauge between the shaft shoulder and the feed roller gear.**
6. **Push the feed clutch towards the feed roller. Tighten the Allen set screw.**



7-8, Transport Belt Replacement

1. **Remove the lower left cover (2 screws) and lower front cover (2 screws).**
2. **Remove the front left locking plate (1 screw).**
3. **Remove the front right locking plate by sliding the locking plate to the right and then lifting it.**
4. **Remove the front pressure roller bracket (1 screw).**
5. **Lift the front of the transport rollers and slide off the transport belt.**



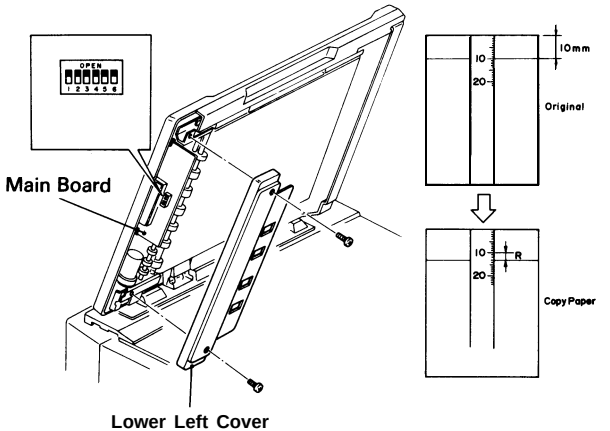
7-9. Leading Edge Registration Adjustment

1. **Adjust the copier leading edge registration before checking the DF leading edge registration. (See "Leading Edge Registration" [copied section.)**
2. **Draw a line 10 mm from the leading edge of a sheet of copy paper and make a few copies of it in the DF mode.**
3. **Check that the leading edge registration is within specification.**

   Leading Edge Registration Specification:
   0 ± 3 m m
4. **If the leading edge registration is out of the specification, adjust using DIP switches 101-3, 4, 5, and 6 on the DF main board. (Remove the lower left cover.)**

NOTE: * **When making copies after adjusting leading edge registration, make sure that the lower left cover is closed firmly.**

*** When DIP switches 101-3, 4, 5, and 6 are OFF, OFF, OFF, and ON, the DF moves in free run mode.**



— Leading Edge Registration (DF) —

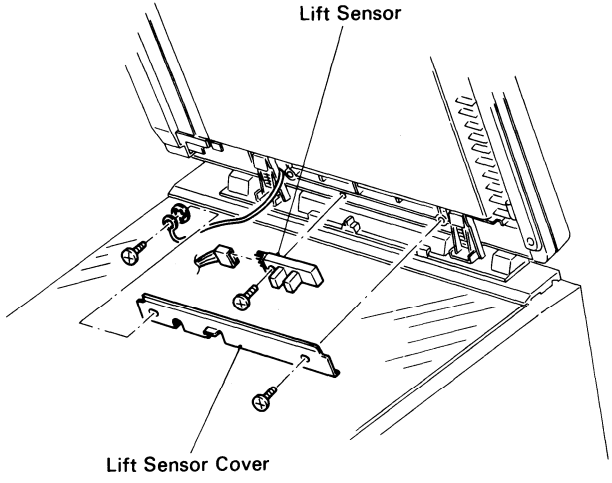
DIP SW101

1: ON 0: OFF

	3	4	5	6	Registration
	1	1	1	0	Decrease (–)
	0	1	1	0	
	1	0	1	0	
	0	0	1	0	
	1	1	0	0	
	0	1	0	0	
	1	0	0	0	Variation
	0	0	0	0	Per Step:
Free Run	0	0	0	1	Approx. 1.0 mm
	1	0	0	1	(0.04")
	0	1	0	1	
	1	1	0	1	
	0	0	1	1	
	1	0	1	1	
	0	1	1	1	
	1	1	1	1	Increase (+)

7-10. Lift Sensor Replacement

1. **Remove the lift sensor cover (2 screws).**
2. **Remove the lift sensor (1 screw and 1 connector).**



7-11. Service Remarks

1. **When removing the document feeder from the copier, always be sure that the document feeder is straight up.**
2. **When closing the document feeder, hold it until completely closed.**

SECTION 8

TROUBLESHOOTING

8-1. Copy Quality Problems

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
1.	UNEVEN IMAGE DENSITY	(1) Fiber optics are dirty (FT2050). (2) Charge corona wire is dirty. (3) Charge corona wire is mounted incorrectly. (4) Quenching lamp is dirty. (5) Reflector is dirty. (6) Exposure lamp is dirty. (7) Mirrors/Lens are dirty (FT2070) (8) Lamp position incorrect (FT2070)	(1) Clean them with the cleaner. (2) Clean it with the cleaner. (3) Check the wire is in the V-slot. (4) Clean it with a soft cloth. (5) Clean it with a soft cloth. (6) Clean it with a soft cloth. (7) Clean them with a soft cloth. Correct uneven density using the adjusting plates. (8) Adjust the exposure lamp position.
2.	WHITE LINES OR STREAKS	(1) Toner blocking on the toner metering blade. (2) Insufficient toner in the development unit. (3) Grid plate is dirty. (4) Charge corona wire is dirty. (5) Mirrors/Lens are dirty (FT2070).	(1) Clean the blade with the toner agitator. (2) Replenish one toner cartridge and agitate the metering blade with the toner agitator. (3) Clean it with a blower brush. (4) Clean it with the cleaner. (5) Clean them with a soft cloth.
3.	FUZZY COPY	(1) Original is not flat on the exposure glass. (2) Fiber optics are dirty (FT2050). (3) Exposure glass is dirty. (4) Fiber optics are not installed securely (FT2050). (5) Mirrors/Lens are dirty (FT2070).	(1) Instruct operator to correct original curl. (2) Clean them with the cleaner. (3) Clean it with a soft cloth. (4) Install the fiber optics in the holder securely. (5) Clean them with a soft cloth.

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
4.	DIRTY BACKGROUND	(1) Light fatigue of the master unit.	(1) Avoid exposing the master unit to light. (Do not leave the machine with the top unit opened for a long time)
		(2) Exposure glass is dirty.	(2) Clean it with a soft cloth.
		(3) Platen cover sheet is dirty.	(3) Clean it with a damp cloth.
		(4) Bias circuit failure.	(4) Check the circuit and replace the defective part.
		(5) Quenching lamp failure.	(5) Check the circuit and replace the defective part.
		(6) Mirrors/Lens are dirty (FT2070).	(6) Clean them with a soft cloth.
		(7) Weak light intensity (FT2070).	(7) Adjust it using VR101.
5.	DIRTY BACKSIDE OR LEADING EDGE	(1) Lower feed guide is dirty.	(1) Clean it with a damp cloth.
		(2) Transfer corona unit is dirty.	(2) Same as (1)
		(3) Transport guide plate is dirty.	(3) Same as (1)
		(4) Transport belt is dirty.	(4) Same as (1)
		(5) Registration roller is dirty.	(5) Clean it with a soft cloth.
6.	BLANK AREAS	(1) Paper is damp.	(1) Change the paper in the cassette. (Instruct operator how to store paper when it is not to be used for a long time.)
		(2) Paper is curled.	(2) Correct the paper curl. (Instruct operator how to correct the curl.)

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
7.	INSUFFICIENT IMAGE DENSITY	(1) Transfer corona wire is dirty. (2) Transfer corona wire is broken. (3) Transfer power pack failure. (4) Master unit has exceeded service life. (5) Paper is damp. (6) Development roller does not rotate.	(1) Clean it with cotton swabs. (2) Replace the transfer corona wire. (3) Check the circuit and replace the defective part. (4) Replace the master unit. (5) Change the paper in the cassette. (6) Check the drive mechanism.
8.	WHITE COPY	(1) Charge corona wire is broken. (2) Charge power pack failure.	(1) Replace the charge corona wire. (2) Check the circuit and replace the defective part with a new one.
9.	FAINT COPY AT LEADING OR TRAILING EDGE	(1) Paper is curled. (2) Paper is damp.	(1) Correct the paper curl before making copies. (2) Change the paper in the cassette. O Instruct operator how to store paper when it is not to be used for a long time. O Thick and/or thin paper sometimes make faint copies due to paper quality. O Instruct the operator to use recommended paper.

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
10.	WRINKLED COPY	(1) Paper is curled. (2) Paper is damp.	(1) Correct the paper curl. (2) Change the paper in the cassette.
11.	BLACK LINES	(1) Thermistor is dirty. (2) Hot roller strippers are dirty. (3) Deformed toner metering blade.	(1) Clean it with a damp cloth. (2) Clean them with a damp cloth. (3) Replace the blade with new one.
12.	JITTER	(1) Insufficient friction of the slider clutch (FT2050).	(1) Replace the clutch. (Forward or Reverse)
13.	MISFEED	(1) Paper is incorrectly loaded. (2) Paper stiffness. (3) Paper feed clutch failure. (4) Paper feed and registration solenoid failure. (5) Paper feed drive failure.	(1) Load the paper in the cassette correctly. (2) Use recommended paper. (3) Apply “Mobil Temp 78” to the clutch spring. (4) Check or replace the solenoid. (5) Check the paper feed drive mechanism.
14.	NOISE	(1) Lack of lubricant.	(1) Apply “Grease 501” to the gears. (2) Apply “Grease 501” to the fiber optics holders.

8-2. Defective Sensor/Switch Table

Sensor/switch	Opened	Shorted
Safety Switch	Copier can not be powered.	Safety function does not work.
Master Sensor	Self-diagnostic code "E7/E7-71"	Self-diagnostic code "E7/E7-71"
Home Position Switch (FT2050)	Self-diagnostic code "E2"	Self-diagnostic code "E2"
Slider Home Position Sensor (FT2070)	Self-diagnostic code "E2-21" "E2-22", or "E2-24"	Self-diagnostic code "E2-21" or "E2-24"
Lens Home Position Sensor (FT2070)	Self-diagnostic code "E2-29"	Self-diagnostic code "E2-28"
Pulse Generator	Self-diagnostic code "E6/E6-61"	Self-diagnostic code "E6/E6-61"
Exposure Sensor (FT2050)	Self-diagnostic code "El"	Self-diagnostic code "El"
Toner End Sensor	Toner End indicator does not turn on at toner end.	Toner End indicator turns on with sufficient toner present.
Toner Overflow Sensor	Replace Master Unit indicator is displayed at non-overflow.	Replace Master Unit indicator does not turn on at overflow.
Toner Near Overflow Sensor	Replace Master Unit indicator blinks when copier not in near overflow condition.	Replace Master Unit indicator does not blink at near overflow.

Sensor/switch	Opened	Shorted
Auto ID Sensor	Dark copy image	Light copy image
Manual Feed Guide Sensor (FT2050)	Even if the manual feed guide is open, copying is not inhibited.	Even if the manual feed guide is closed, copying is inhibited.
Paper Tray Sensor (FT2070)	Even if the paper tray is raised, copying is not inhibited.	Even if the paper tray is lowered copying is inhibited.
Manual Feed Sensor (FT2050) Relay Feed Sensor (FT2070)	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)
Paper Feed Sensor	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)
Exit Sensor	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)
Paper Size Switch	CPU may detect wrong paper size.	CPU may detect wrong paper size.
Paper Width Sensor/ Paper Length Sensor (FT2070)	CPU may detect wrong paper size.	CPU may detect wrong paper size.
Paper End Sensor (FT2070)	Even if there is no paper in the cassette, copying is not inhibited.	Even if there is paper in the cassette, copying is inhibited.

Sensor/switch	Opened	Shorted
Sorter Switch (Sorter)	Copying is inhibited, even when sorter is engaged with copier.	Copying is not inhibited, even when sorter is slid away from copier.
Paper Sensor (Sorter)	Misfeed will occur.	Check Sorter Paper Path indicator is displayed at power on. (Initial Jam Check)
Home Position Switch (Sorter)	Bin drive motor continues to rotate after power on.	Bins do not reset to home position at power on. (Only one bin is lowered.)
Wheel Switch (Sorter)	Bin drive motor continues to rotate after power on.	Bin drive motor continues to rotate after power on.
Lift Sensor (DF)	Even if the feeder is opened, the copier stays in the DF mode.	Even if the feeder is closed, the copier does not shift to the DF mode.
Original Set Sensor (DF)	The Insert Original indicator does not turn off even if an original is inserted.	The Insert Original indicator stays off even if no original is inserted.
Feed-in Sensor (DF)	Original misfeed will occur.	The Original Misfeed indicator turns on at power on. (Initial Jam Check)
Pulse Generator (DF)	Original misfeed will occur.	Original misfeed will occur.

8-3. Self-Diagnostic Code Troubleshooting (FT2050)

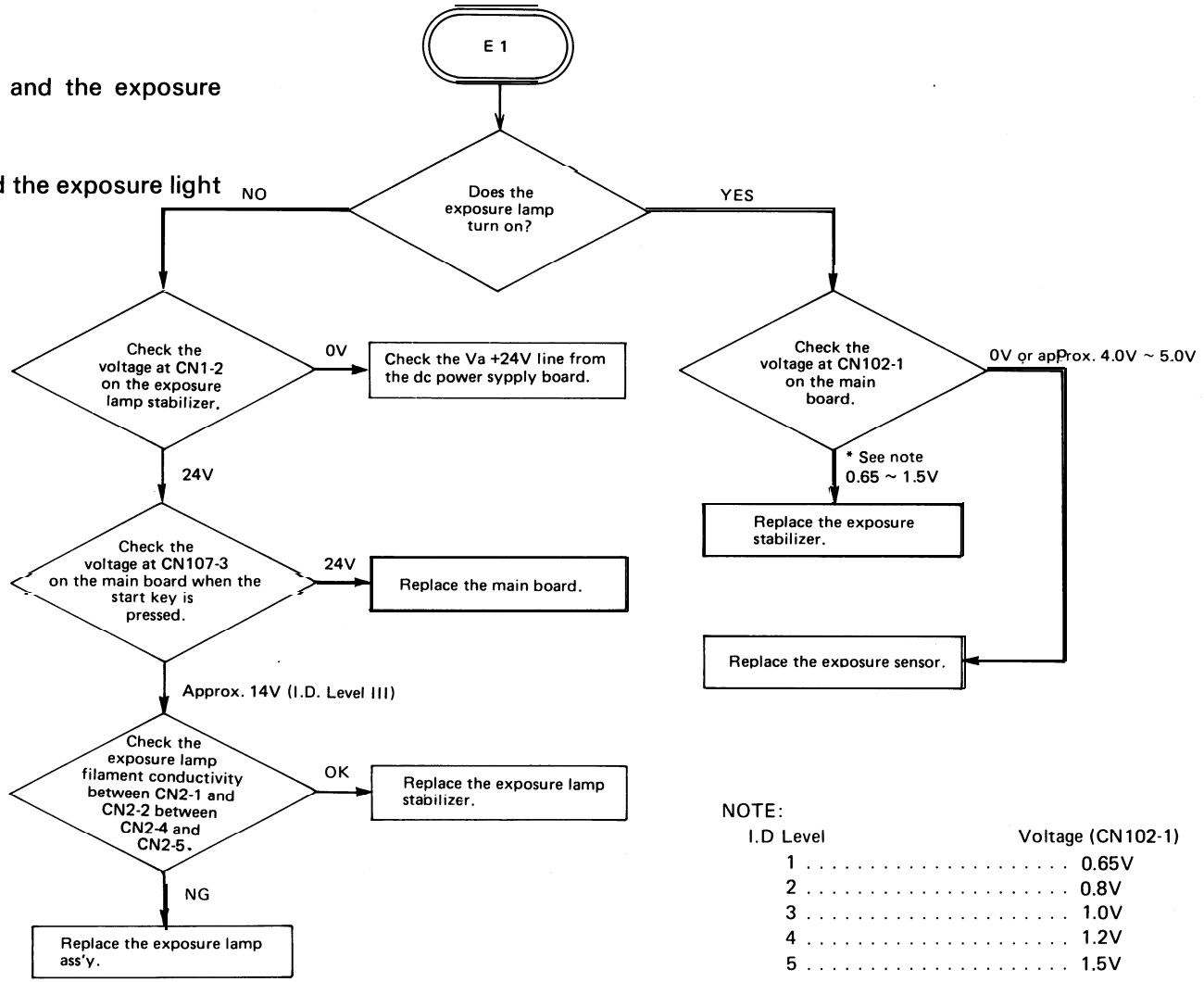
E 1 Exposure

Definition

1. Lights if the duty (T_1/T) is maximum and the exposure light intensity is too weak.
2. Lights if the duty (T_1/T) is minimum and the exposure light intensity is too strong.

Possible causes

1. Exposure sensor open or shorted
2. Exposure lamp stabilizer defective
3. Exposure lamp broken
4. Main board defective


E 1
Does the exposure lamp turn on?
NO
YES
Check the voltage at CN1-2 on the exposure lamp stabilizer.
0V
Check the Va +24V line from the dc power sypply board.
24V
Check the voltage at CN107-3 on the main board when the start key is pressed.
24V
Replace the main board.
Approx. 14V (I.D. Level III)
Check the exposure lamp filament conductivity between CN2-1 and CN2-2 between CN2-4 and CN2-5.
OK
Replace the exposure lamp stabilizer.
NG
Replace the exposure lamp ass'y.
Check the voltage at CN102-1 on the main board.
0V or approx. 4.0V ~ 5.0V
* See note
0.65 ~ 1.5V
Replace the exposure stabilizer.
Replace the exposure sensor.

NOTE:

I.D Level	Voltage (CN102-1)
1	0.65V
2	0.8V
3	1.0V
4	1.2V
5	1.5V

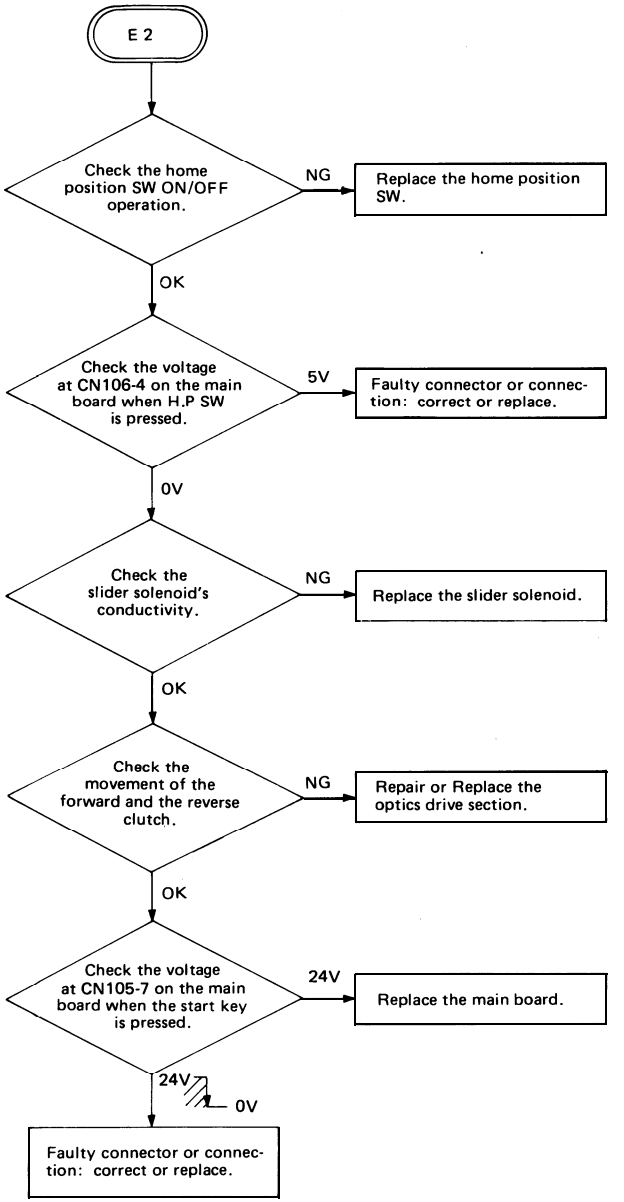
E 2 Slider

Definition

1. **Lights if the home position SW does not turn on within 4 s after the start key is pressed.**
2. **Lights if the home position SW is off, when the slider starts forward drive.**
3. **Lights if home position SW does not turn off within 1 s after the slider starts.**

Possible causes

1. **Home position switch broken**
2. **Forward and/or reverse clutch malfunction**
3. **Slider solenoid defective**
4. **Main board defective**


E 2
Check the home position SW ON/OFF operation.
NG
Replace the home position SW.
OK
Check the voltage at CN106-4 on the main board when H.P SW is pressed.
5V
Faulty connector or connection: correct or replace.
0V
Check the slider solenoid's conductivity.
NG
Replace the slider solenoid.
OK
Check the movement of the forward and the reverse clutch.
NG
Repair or Replace the optics drive section.
OK
Check the voltage at CN105-7 on the main board when the start key is pressed.
24V
Replace the main board.
24V
0V
Faulty connector or connection: correct or replace.

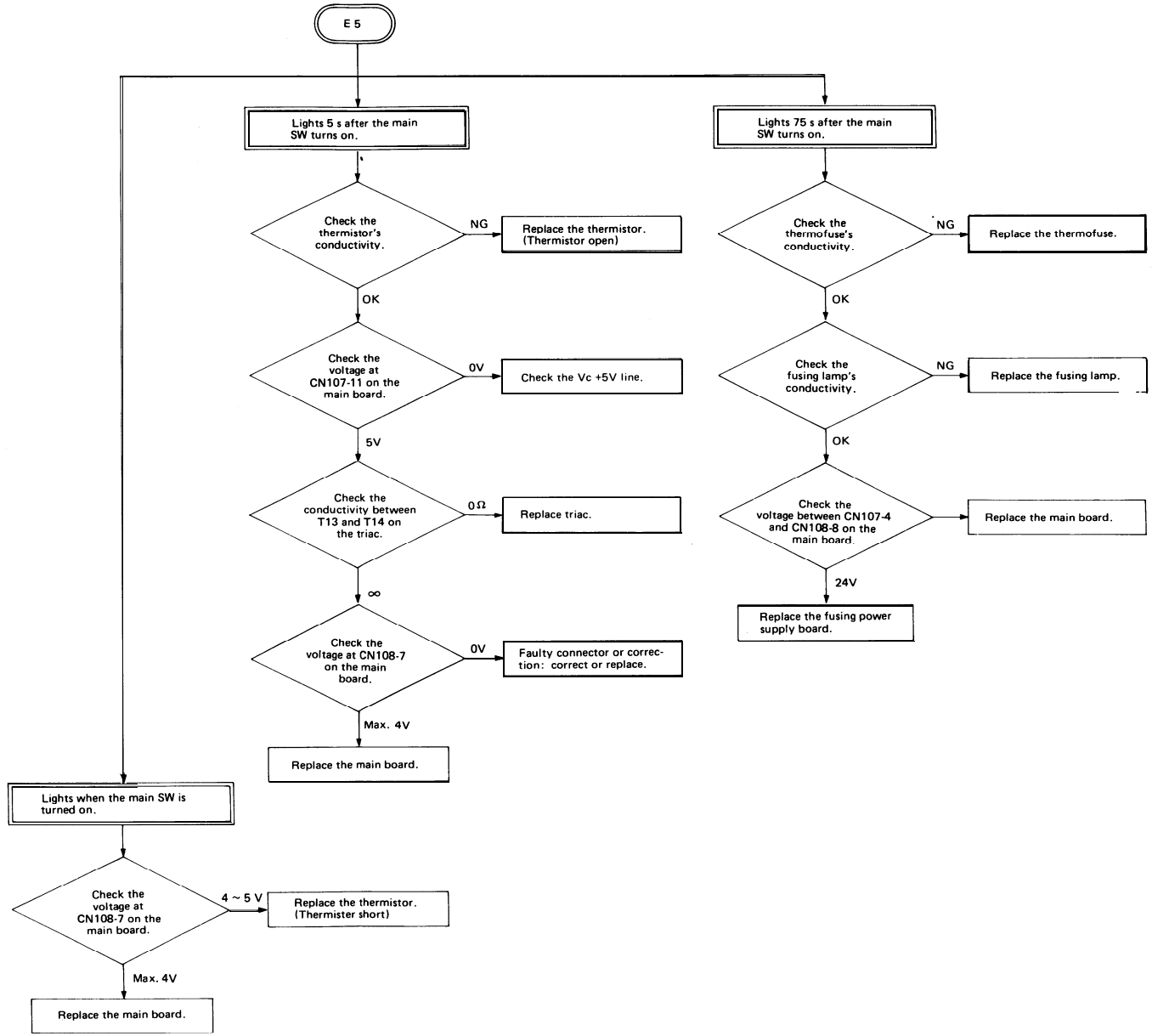
E 5 Fusing

Definition

1. Lights if the temperature detected by the TH does not reach 2°C within 5 s after the main switch turns on.
2. Lights if the temperature detected by the TH does not reach 125°C within 75 s after the main switch turns on.
3. Lights if the temperature detected by the TH is higher than 270°C.

Possible causes

1. Thermistor defective
2. Fusing power supply board defective
3. Triac failure
4. Thermofuse open
5. Fusing lamp burned out
6. Main board defective


E 5
Lights 5 s after the main SW turns on.
Check the thermistor's conductivity.
NG
Replace the thermistor. (Thermistor open)
OK
Check the voltage at CN107-11 on the main board.
0V
Check the Vc +5V line.
5V
Check the conductivity between T13 and T14 on the triac.
0Ω
Replace triac.
∞
Check the voltage at CN108-7 on the main board.
0V
Faulty connector or correction: correct or replace.
Max. 4V
Replace the main board.
Lights 75 s after the main SW turns on.
Check the thermofuse's conductivity.
NG
Replace the thermofuse.
OK
Check the fusing lamp's conductivity.
NG
Replace the fusing lamp.
OK
Check the voltage between CN107-4 and CN108-8 on the main board.
Replace the main board.
24V
Replace the fusing power supply board.
Lights when the main SW is turned on.
Check the voltage at CN108-7 on the main board.
4 ~ 5 V
Replace the thermistor. (Thermister short)
Max. 4V
Replace the main board.

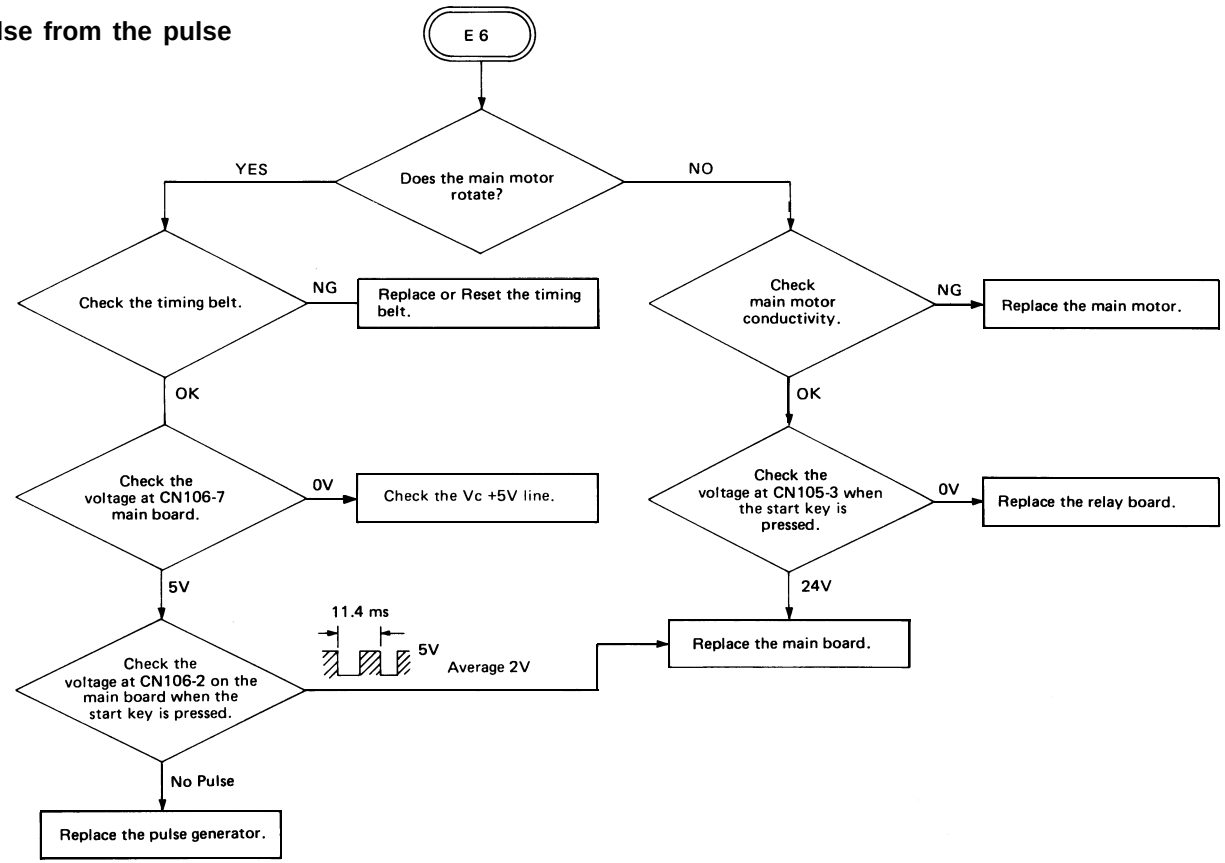
E 6 Functional Drive

Definition

1. **Lights if the CPU does not received a pulse from the pulse generator for 1.6 s during a copy cycle.**

Possible causes

1. **Main motor failure**
2. **Relay board defective**
3. **Timing belt broken or out of place**
4. **Main board defective**
5. **Pulse generator defective**



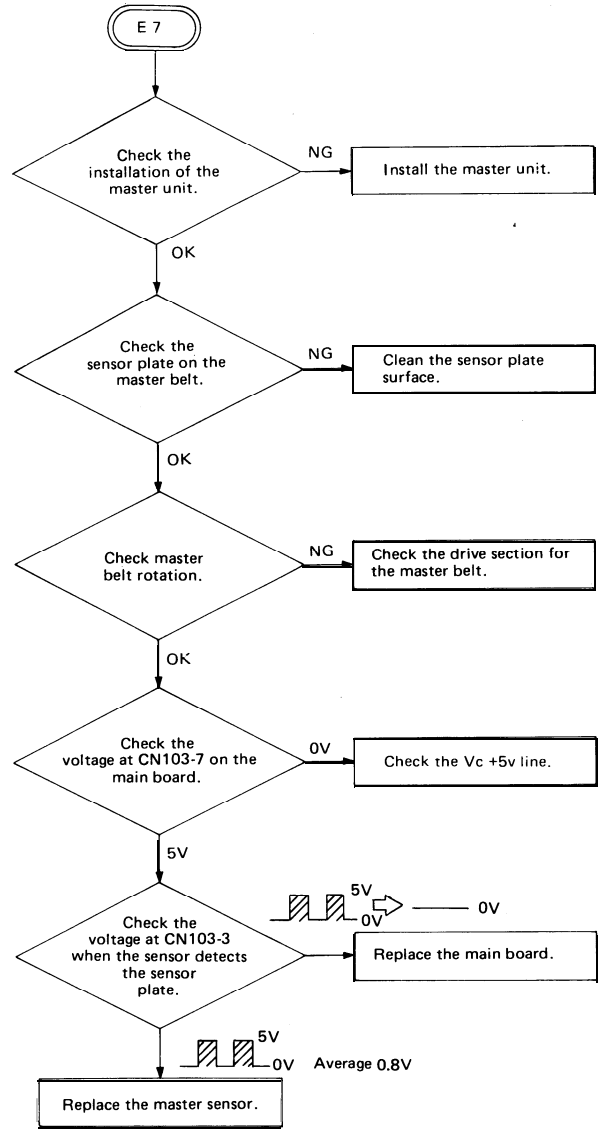
E 7 Master Unit

Definition

1. **Lights if the CPU does not detect the sensor plate within 6 s after belt rotation.**

Possible causes

1. **No master unit installed**
2. **Main board defective**
3. **Master sensor defective**
4. **Master unit defective**



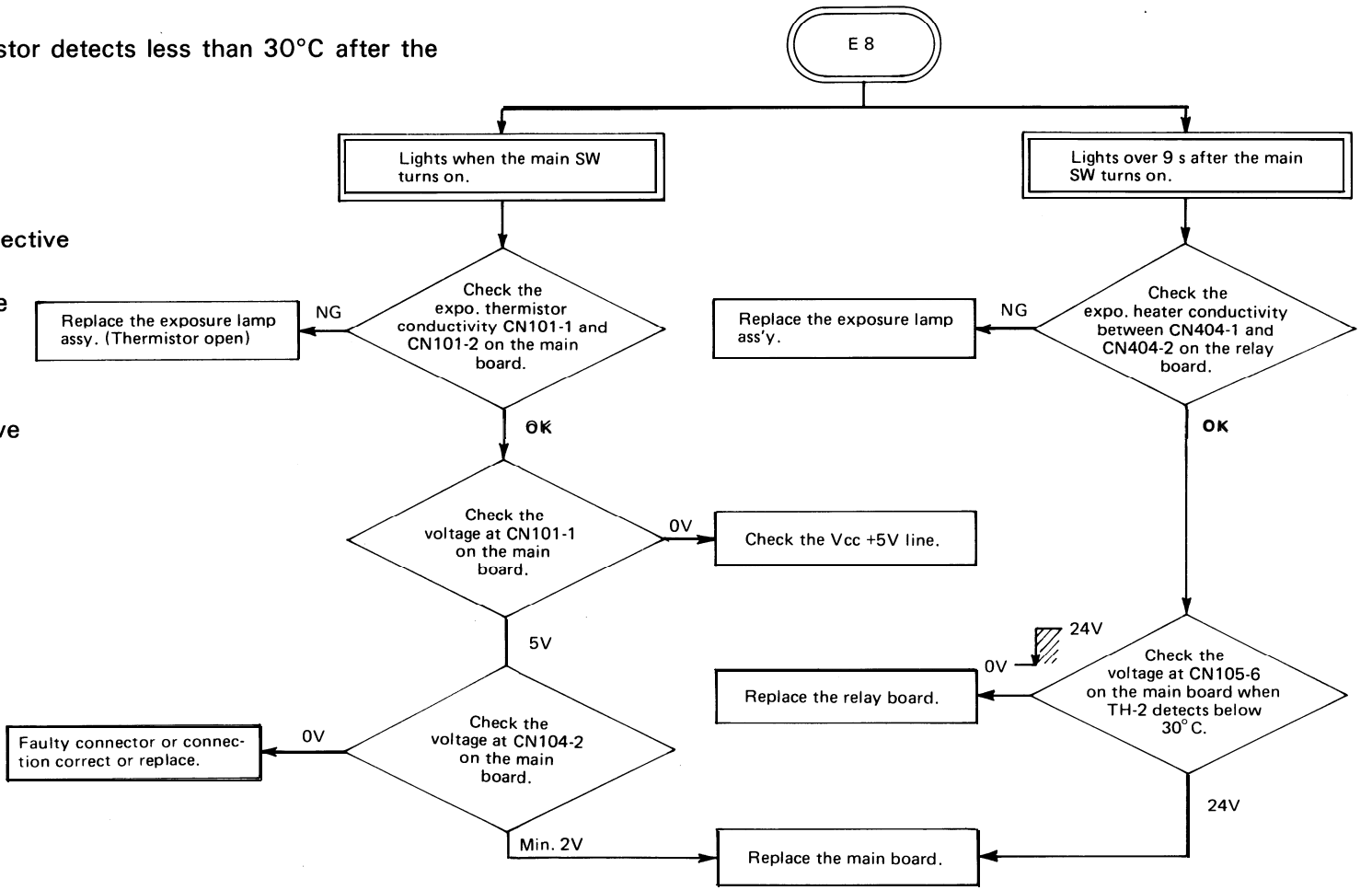
E 8 Exposure Lamp Heater

Definition

1. Lights if the thermistor circuit opens.
2. Lights if the thermistor detects less than 30°C after the warm-up period.

Possible causes

1. Exposure heater defective
2. Thermistor defective
3. Thermofuse blown
4. Relay Board defective


E 8
Lights when the main SW turns on.
Lights over 9 s after the main SW turns on.
Check the expo. thermistor conductivity CN101-1 and CN101-2 on the main board.
NG
Replace the exposure lamp assy. (Thermistor open)
OK
Check the expo. heater conductivity between CN404-1 and CN404-2 on the relay board.
NG
Replace the exposure lamp ass'y.
OK
Check the voltage at CN101-1 on the main board.
0V
Check the Vcc +5V line.
5V
Check the voltage at CN104-2 on the main board.
0V
Faulty connector or connection correct or replace.
Min. 2V
Replace the main board.
24V
Check the voltage at CN105-6 on the main board when TH-2 detects below 30°C.
0V
Replace the relay board.
24V

8-4. Self-Diagnostic Code Troubleshooting (FT2070)

E1 Exposure

Definition

<E1-12>

1. Lights if the feedback signal becomes higher than 4.2 volts or less than 0.5 volt when the exposure lamp is on.
2. Lights if the feedback signal becomes higher than 1 volt when the exposure lamp should be off.

<E1-13>

1. Lights if the CPU does not receive the zero cross signal within 0.56 second.

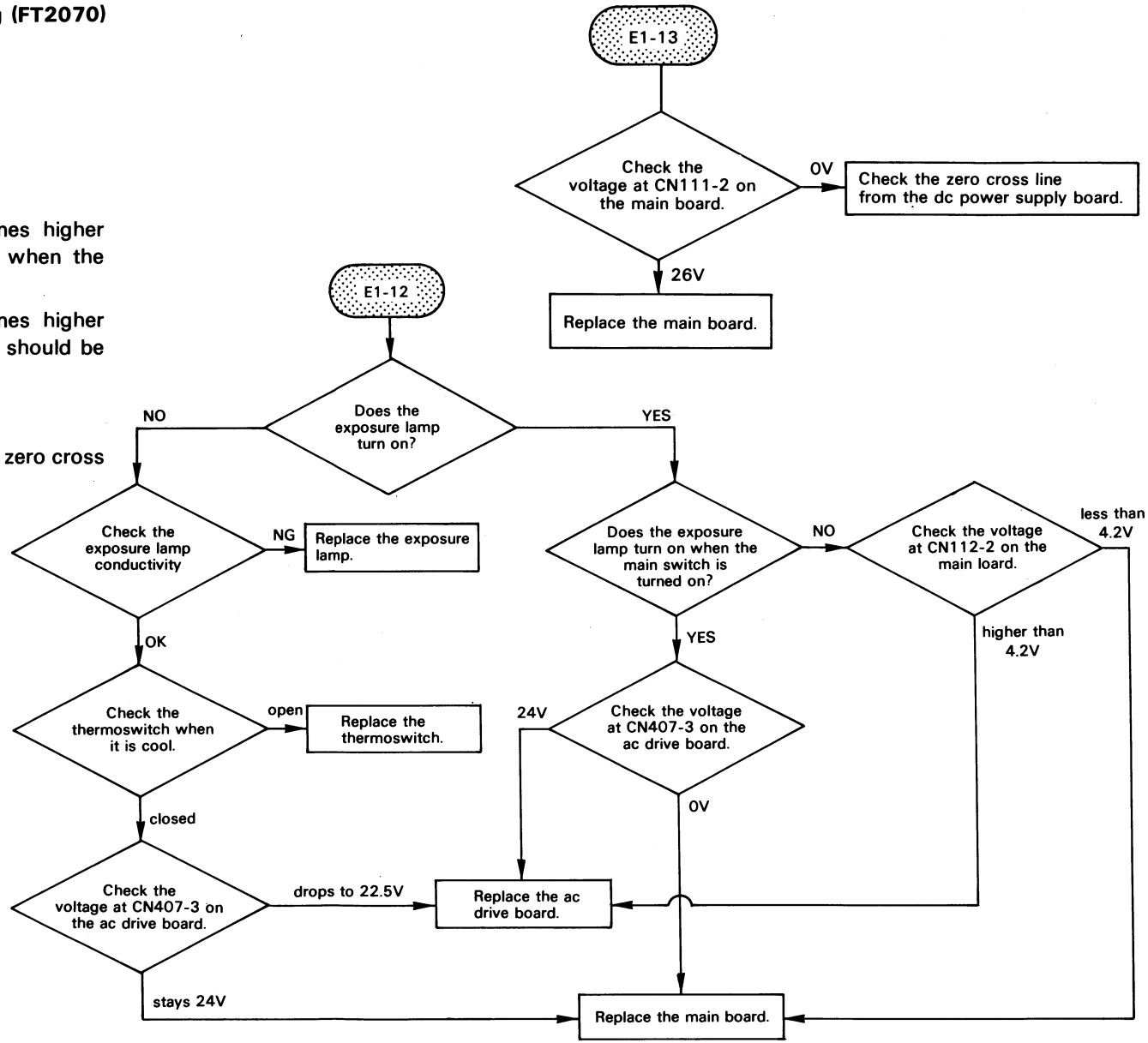
Possible causes

<E1-12>

1. Exposure lamp open
2. Thermoswitch open
3. Ac drive board defective
4. Main board defective

<E1-13>

1. Main board defective
2. Zero cross line open



E2 Optics

Definition

<E2-20 > (main board **check)**

1. **Lights if the main CPU does not receive the ready signal from the optics CPU within 10 seconds after the main CPU sends the signal to change the reproduction ratio.**

<E2-21 > (optics board check)

1. **Lights if the slider home position sensor does not turn on within 7 seconds after the Start key is pressed.**
2. **Lights if the slider is more than 1 second late in returning to the home position when in a multi-copy run.**

<E2-22 > (optics board check)

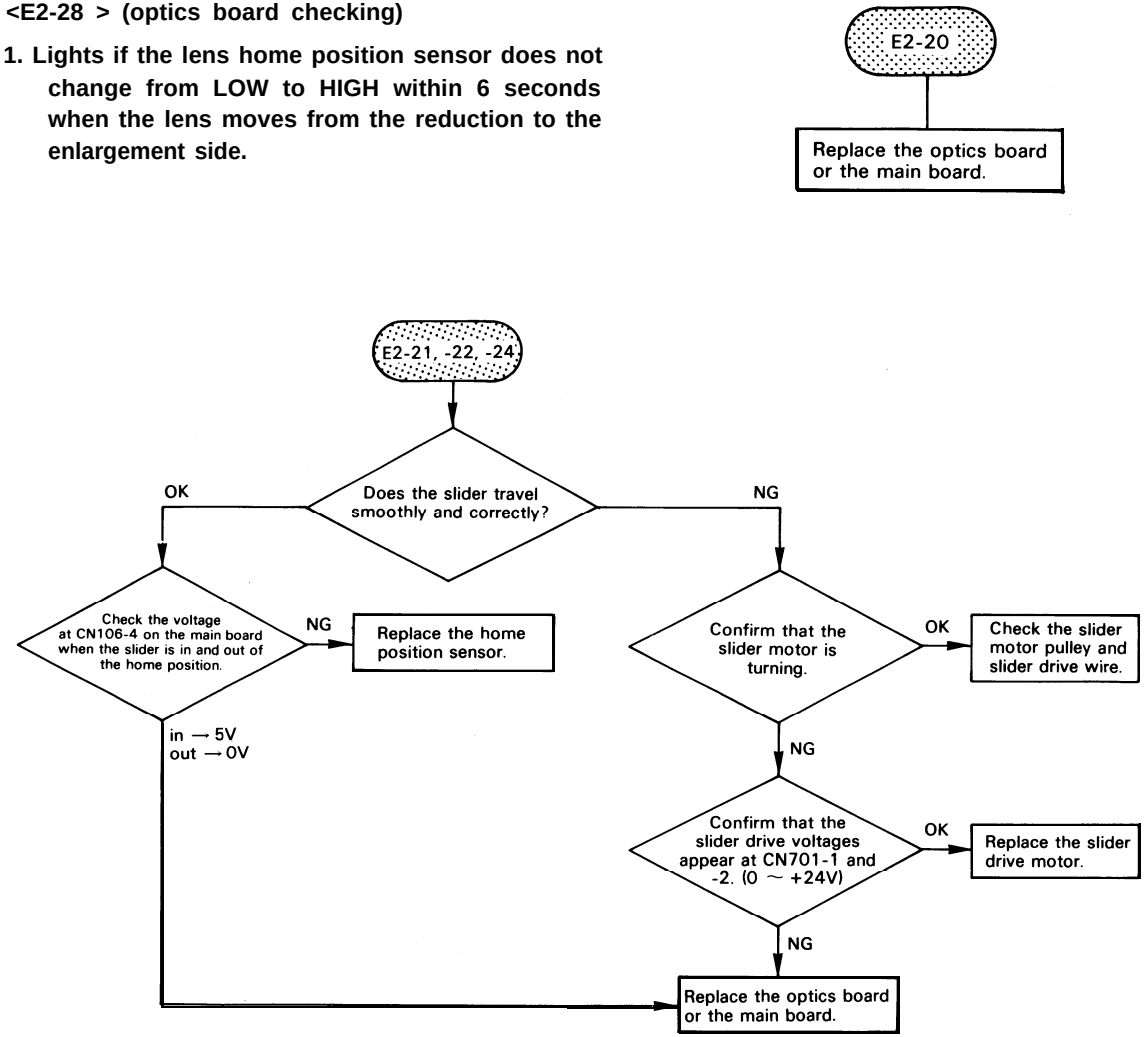
1. **Lights if the slider home position sensor stays on for longer than the equivalent of 10 meters of slider travel (as measured by the servomotor encoder).**

<E2-24 > (main board check)

1. **Lights if the slider home position sensor does not turn on within 8.2 seconds after the Start key is pressed.**
2. **Lights if the slider home position sensor stays on for longer than 1.3 seconds after slider should start moving.**
3. **Lights if the slider home position sensor does not turn on before the next slider start time when in a multi-copy run.**

<E2-28 > (optics board checking)

1. **Lights if the lens home position sensor does not change from LOW to HIGH within 6 seconds when the lens moves from the reduction to the enlargement side.**


E2-20
Replace the optics board or the main board.
E2-21, -22, -24
Does the slider travel smoothly and correctly?
OK
NG
Check the voltage at CN106-4 on the main board when the slider is in and out of the home position.
NG
Replace the home position sensor.
in → 5V
out → 0V
Confirm that the slider motor is turning.
OK
Check the slider motor pulley and slider drive wire.
NG
Confirm that the slider drive voltages appear at CN701-1 and -2. (0 ~ +24V)
OK
Replace the slider drive motor.
NG
Replace the optics board or the main board.

<E2-29 > (optics board checking)

1. Lights if the lens home position sensor does not change from HIGH to LOW within 6 seconds when the lens moves from the enlargement to the reduction side.

<E2-2E > (optics board checking)

1. Lights if no encoder pulse is received for 118 milliseconds during the copy cycle.

Possible causes

<E2-20 >

1. **Optics board defective**
2. **Main board defective**

<E2-21, -22, -24>

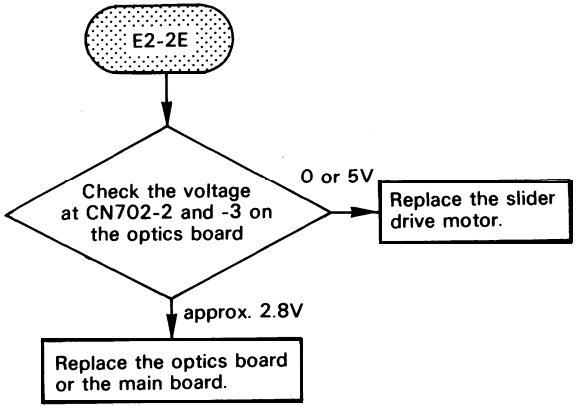
1. **Home position sensor defective**
2. **Slider motor pulley or slider drive wire oily or damaged**
3. **Slider drive motor failure**
4. **Optics board defective**
5. **Main board defective**

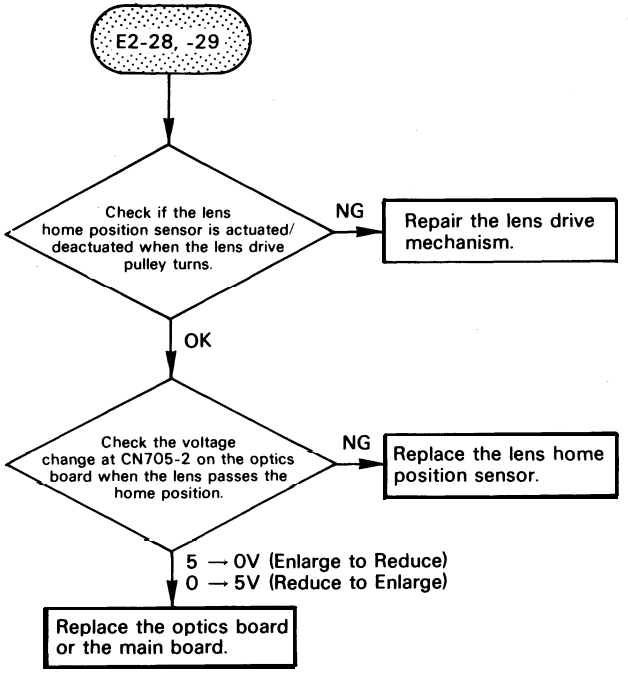
<E2-28, -29>

1. **Lens home position sensor defective**
2. **Lens drive mechanism broken**
3. **Optics board defective**
4. **Main board defective**

<E2-2E >

1. **Slider drive motor failure**
2. **Optics board failure**
3. **Main board failure**


E2-2E
Check the voltage at CN702-2 and -3 on the optics board
0 or 5V
Replace the slider drive motor.
approx. 2.8V
Replace the optics board or the main board.


E2-28, -29
Check if the lens home position sensor is actuated/ deactuated when the lens drive pulley turns.
NG
Repair the lens drive mechanism.
OK
Check the voltage change at CN705-2 on the optics board when the lens passes the home position.
NG
Replace the lens home position sensor.
5 → 0V (Enlarge to Reduce)
0 → 5V (Reduce to Enlarge)
Replace the optics board or the main board.

E5 Fusing

Definition

<E5-52 >

1. Lights if the temperature detected by the thermister does not reach 125°C within 75 seconds after the main switch turns on.

<E5-53 >

1. Lights if the temperature detected by the thermistor is higher than 270°C.

<E5-55 >

1. Lights if the temperature detected by the thermistor does not reach 2°C within 5 seconds after the main switch turns on.

Possible causes

<E5-52 >

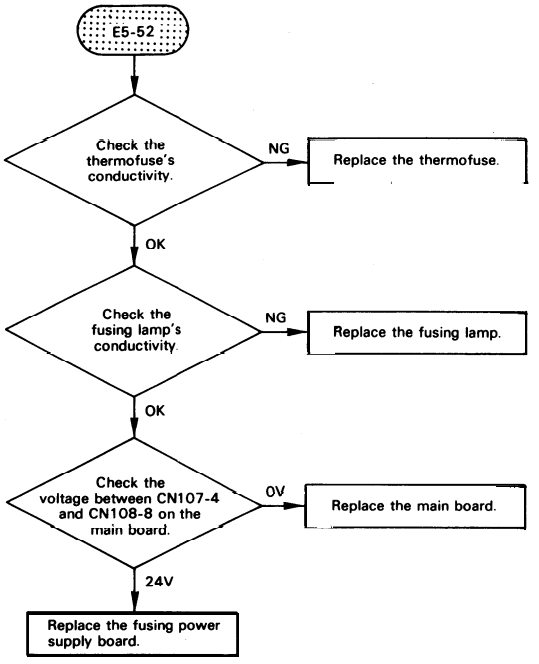
1. Thermofuse open
2. Fusing lamp burned out
3. Fusing power supply board defective
4. Main board defective

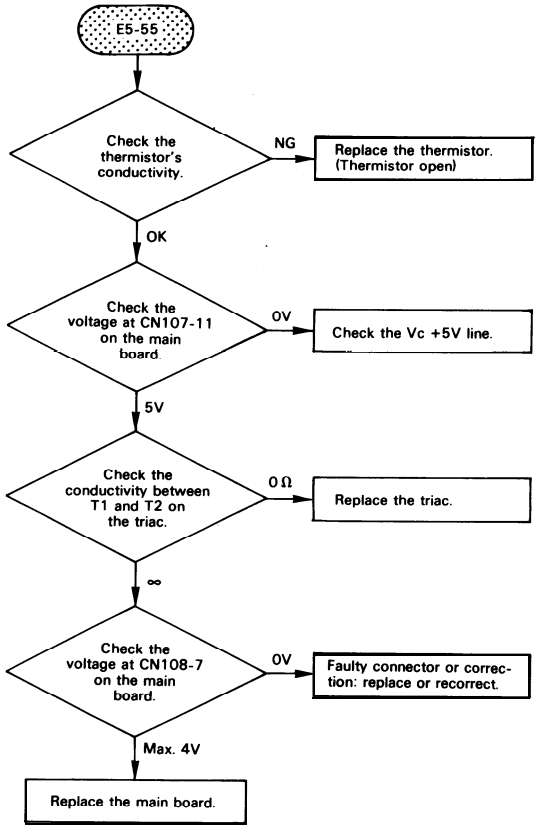
<E5-53 >

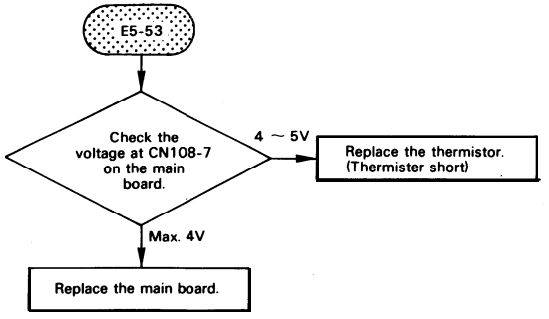
1. Thermistor short
2. Main board defective

<E5-55 >

1. Thermistor open
2. Fusing triac failure
3. Main board defective






E5-53
Check the voltage at CN108-7 on the main board.
4 ~ 5V
Replace the thermistor. (Thermister short)
Max. 4V
Replace the main board.

E6 Functional Drive

Definition

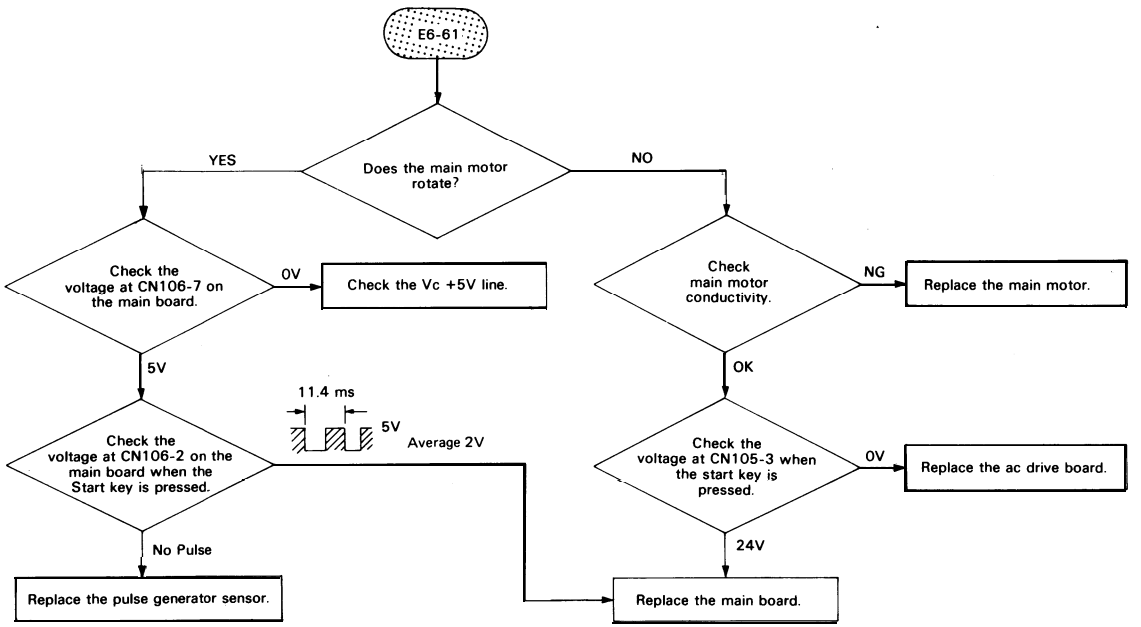
<E6-61 >

1. Lights if the CPU does not receive a pulse from the pulse generator for 1.6s during a copy cycle.

Possible causes

<E6-61 >

1. **Main motor failure**
2. **Ac drive board defective**
3. **Main board defective**
4. **Pulse generator sensor defective**



E7 Master Unit

Definition

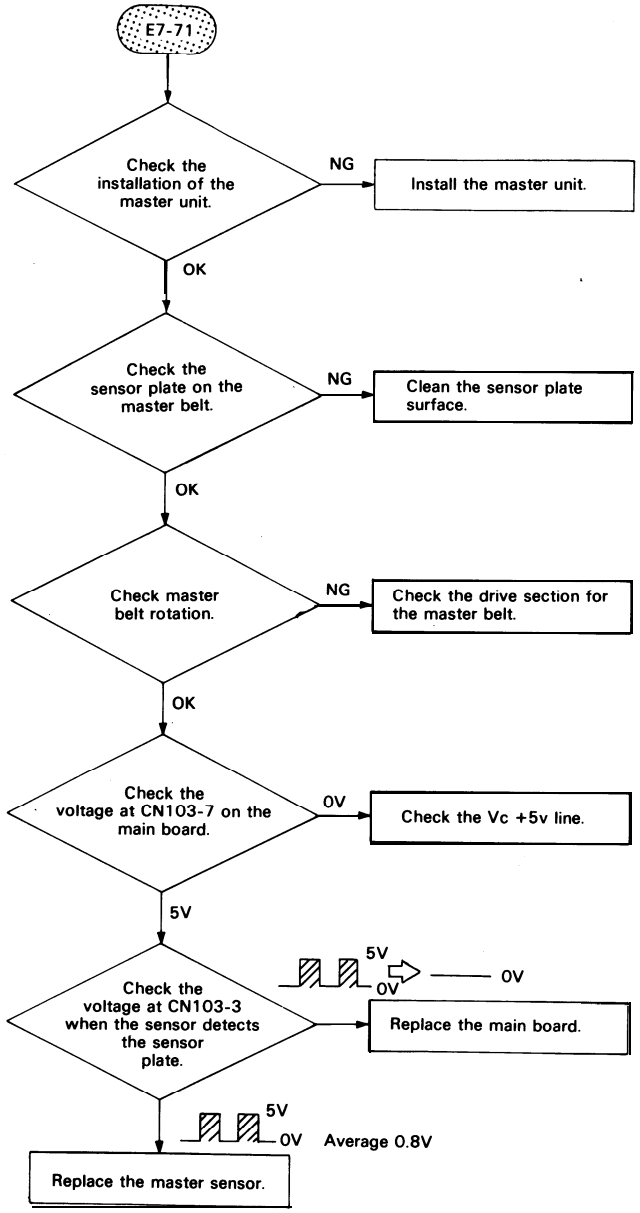
<E7-71 >

1. **Lights if the CPU does not detect the sensor plate within 6s after belt rotation starts.**

Possible causes

<E7-71 >

1. **No master unit installed**
2. **Main board defective**
3. **Master sensor defective**
4. **Master unit defective**

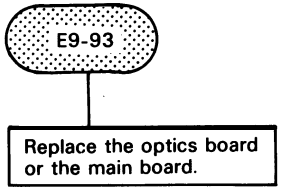


E9 Optics Board

Definition

<E9-93 >

1. **Lights if an irregular signal is sent from the optics board to the main board.**



Possible causes

<E9-93 >

1. **Optics board defective**
2. **Main board defective**

EA Sorter

Definition

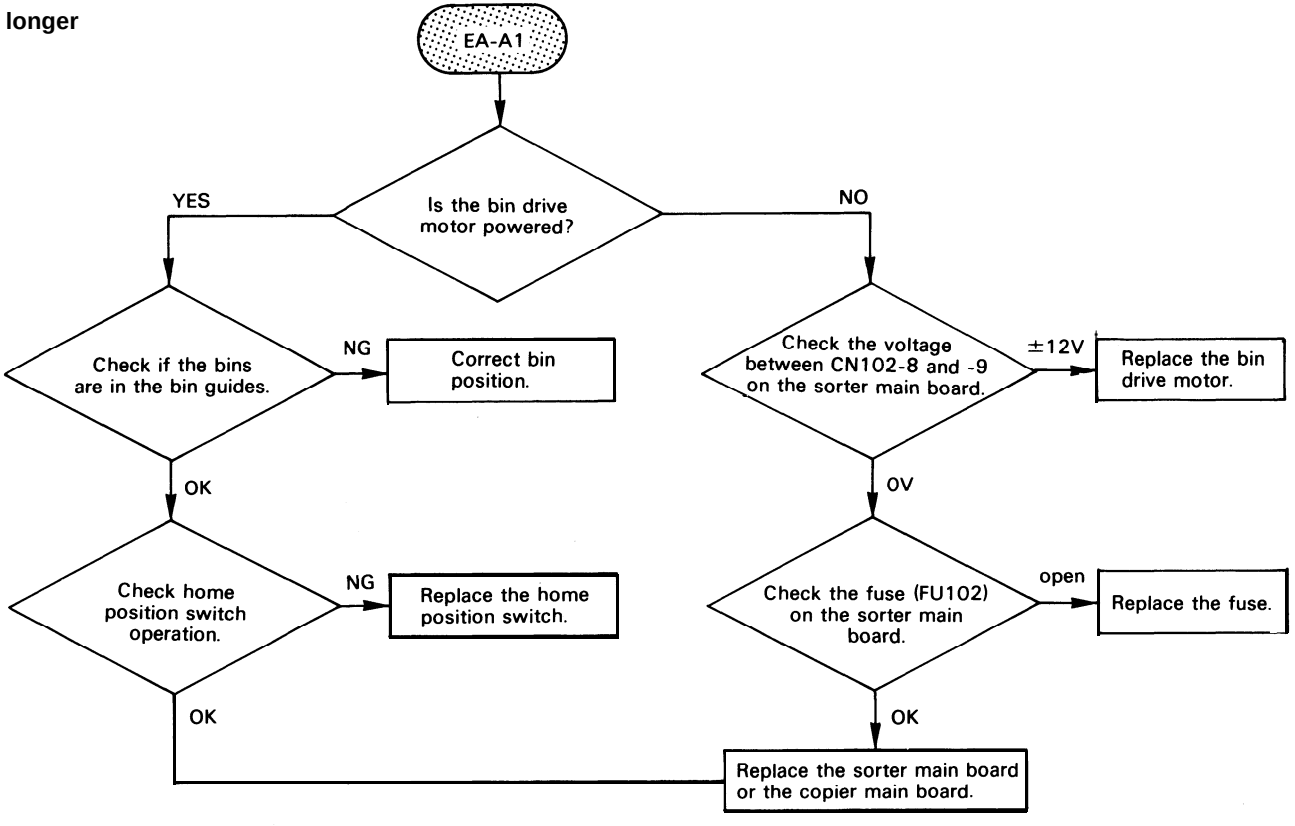
<EA-A 1>

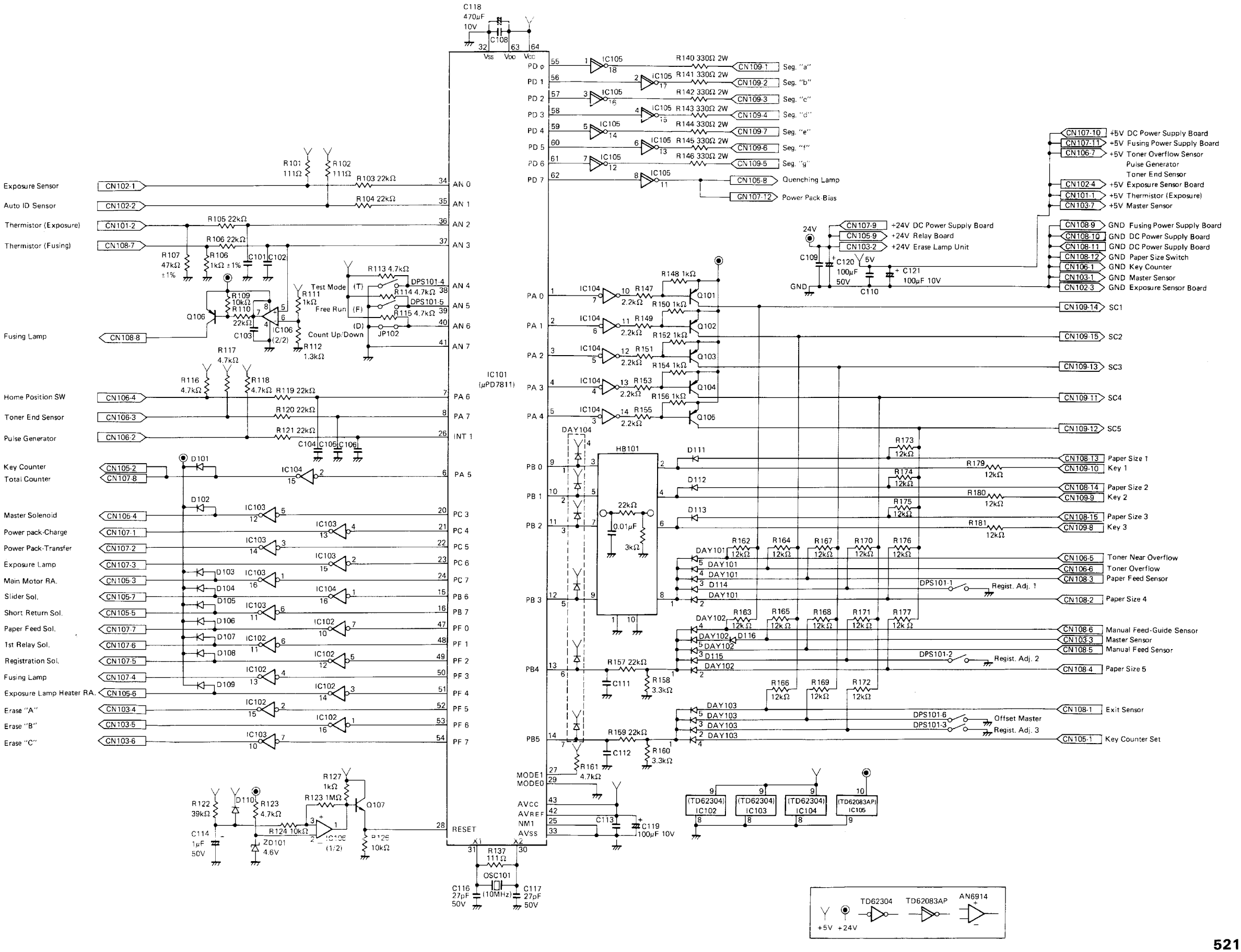
1. Lights if the bin drive motor rotates for longer than 12 seconds.

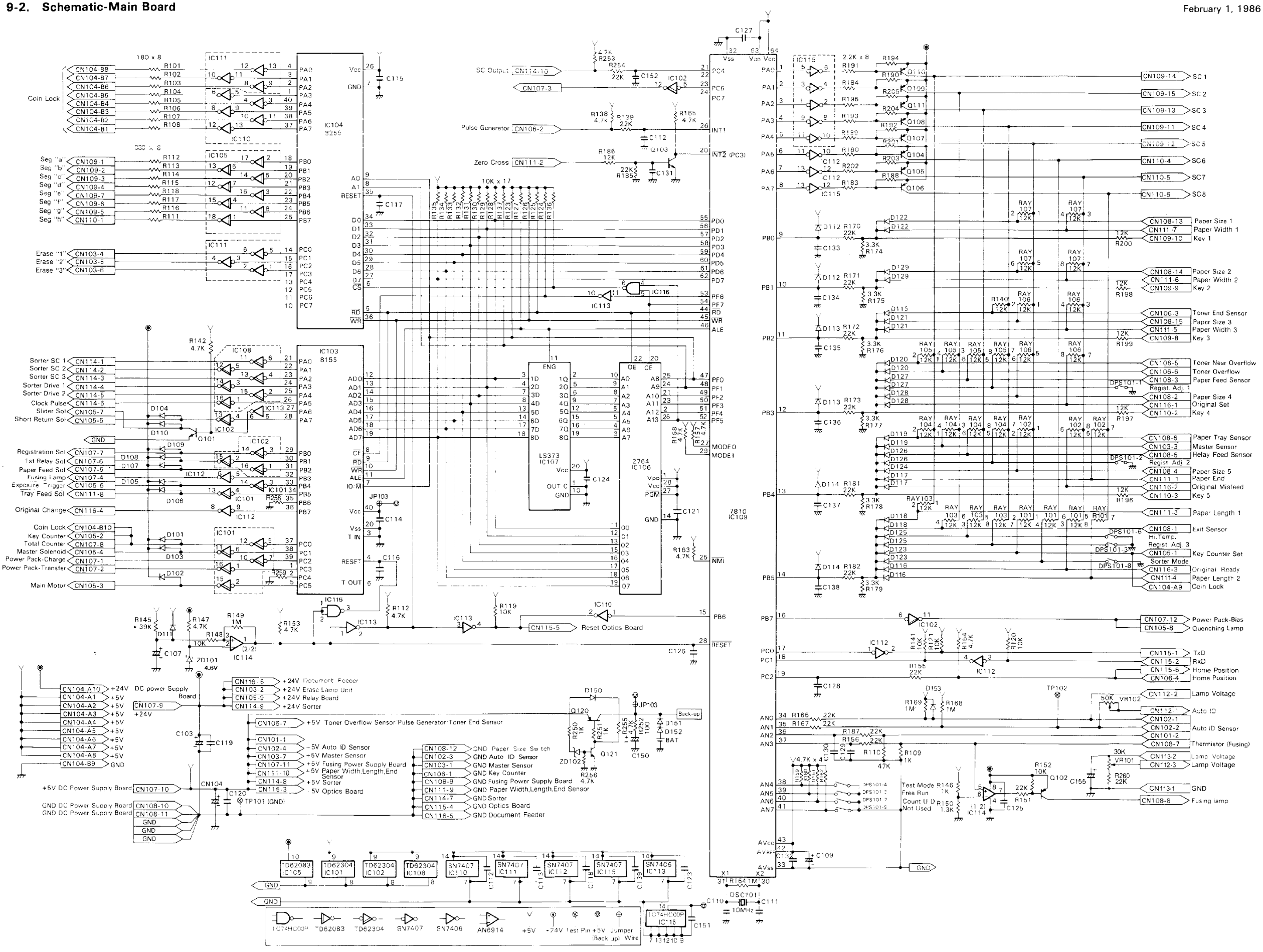
Possible causes

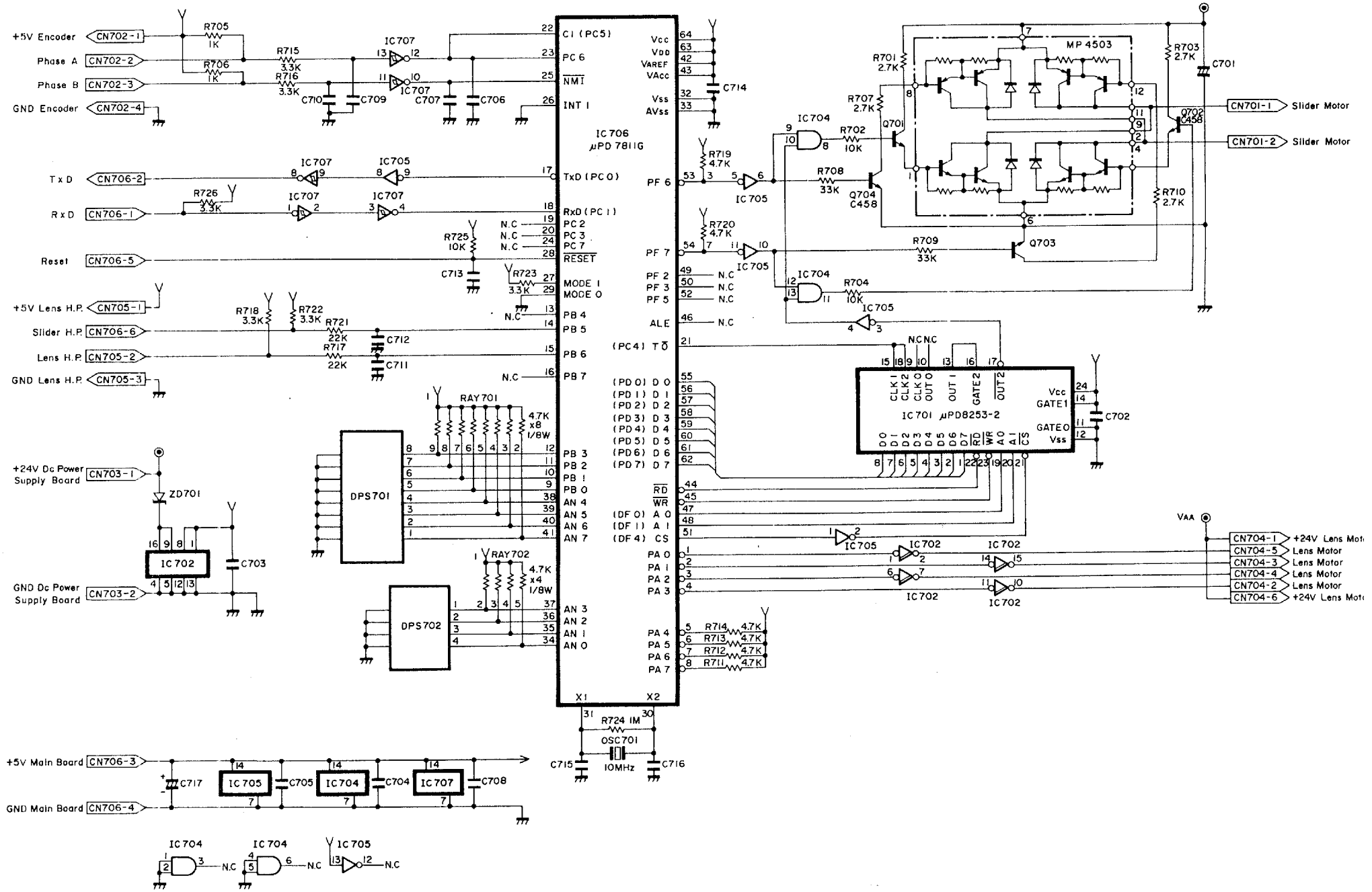
<EA-A1>

1. Bins out of position
2. Home position switch open
3. Fuse (FU102) open
4. Bin drive motor failure
5. Sorter main board defective
6. Copier main board defective



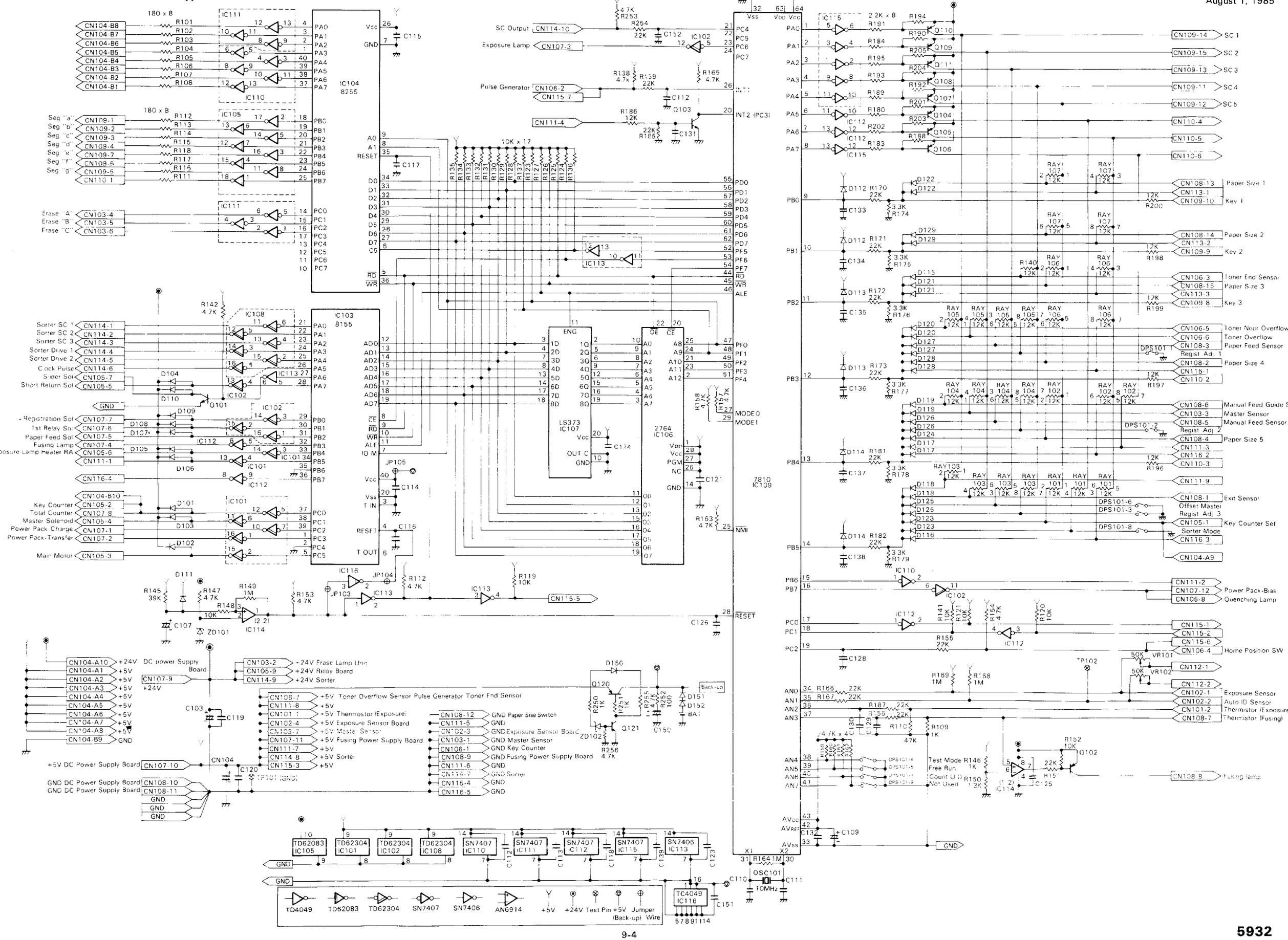

C118 470µF 10V
C108
IC101 (µPD7811)
Vss Vdd Vcc
Exposure Sensor CN102-1
Auto ID Sensor CN102-2
Thermistor (Exposure) CN101-2
Thermistor (Fusing) CN108-7
Fusing Lamp CN108-8
Home Position SW CN106-4
Toner End Sensor CN106-3
Pulse Generator CN106-2
Key Counter CN105-2
Total Counter CN107-8
Master Solenoid CN105-4
Power pack-Charge CN107-1
Power Pack-Transfer CN107-2
Exposure Lamp CN107-3
Main Motor RA. CN105-3
Slider Sol. CN105-7
Short Return Sol. CN105-5
Paper Feed Sol. CN107-7
1st Relay Sol. CN107-6
Registration Sol. CN107-5
Fusing Lamp CN107-4
Exposure Lamp Heater RA. CN105-6
Erase "A" CN103-4
Erase "B" CN103-5
Erase "C" CN103-6
Test Mode
Free Run
Count Up/Down
JP102
DPS101-4
DPS101-5
IC106 (2/2)
IC104 (1/2)
ZD101 4.6V
OSC101 (10MHz)
C116 27pF 50V
C117 27pF 50V
C114 1µF 50V
C119 100µF 10V
C120 100µF 50V
C121 100µF 10V
C110
C111
C112
C113
Seg. "a" CN109-1
Seg. "b" CN109-2
Seg. "c" CN109-3
Seg. "d" CN109-4
Seg. "e" CN109-7
Seg. "f" CN109-6
Seg. "g" CN109-5
Quenching Lamp CN105-8
Power Pack Bias GN107-12
+5V DC Power Supply Board CN107-10
+5V Fusing Power Supply Board CN107-11
+5V Toner Overflow Sensor Pulse Generator Toner End Sensor CN106-7
+5V Exposure Sensor Board CN102-4
+5V Thermistor (Exposure) CN101-1
+5V Master Sensor CN103-7
+24V DC Power Supply Board CN107-9
+24V Relay Board CN105-9
+24V Erase Lamp Unit CN103-2
GND Fusing Power Supply Board CN108-9
GND DC Power Supply Board CN108-10
GND DC Power Supply Board CN108-11
GND Paper Size Switch CN108-12
GND Key Counter CN106-1
GND Master Sensor CN103-1
GND Exposure Sensor Board CN102-3
SC1 CN109-14
SC2 CN109-15
SC3 CN109-13
SC4 CN109-11
SC5 CN109-12
Paper Size 1 CN108-13
Key 1 CN109-10
Paper Size 2 CN108-14
Key 2 CN109-9
Paper Size 3 CN108-15
Key 3 CN109-8
Toner Near Overflow CN106-5
Toner Overflow CN106-6
Paper Feed Sensor CN108-3
Regist. Adj. 1
Paper Size 4 CN108-2
Manual Feed-Guide Sensor CN108-6
Master Sensor CN103-3
Manual Feed Sensor CN108-5
Regist. Adj. 2
Paper Size 5 CN108-4
Exit Sensor CN108-1
Offset Master
Regist. Adj. 3
Key Counter Set CN105-1
(TD62304) IC102
(TD62304) IC103
(TD62304) IC104
(TD62083AP) IC105
TD62304
TD62083AP
AN6914
+5V +24V


IC104 8255
IC103 8155
IC105
IC106 2764
IC107 LS373
IC108
IC109 7810
IC110
IC111
IC112
IC113
IC114
IC115
IC116
IC101
IC102
Coin Lock
Seg "a"
Seg "b"
Seg "c"
Seg "d"
Seg "e"
Seg "f"
Seg "g"
Seg "h"
Erase "1"
Erase "2"
Erase "3"
SC Output
Pulse Generator
Zero Cross
Sorter SC 1
Sorter SC 2
Sorter SC 3
Sorter Drive 1
Sorter Drive 2
Clock Pulse
Slider Sol
Short Return Sol
Registration Sol
1st Relay Sol
Paper Feed Sol
Fusing Lamp
Exposure Trigger
Tray Feed Sol
Original Change
Coin Lock
Key Counter
Total Counter
Master Solenoid
Power Pack-Charge
Power Pack-Transfer
Main Motor
Reset Optics Board
DC power Supply Board
+24V Document Feeder
+24V Erase Lamp Unit
+24V Relay Board
+24V Sorter
+5V Toner Overflow Sensor Pulse Generator Toner End Sensor
+5V Auto ID Sensor
+5V Master Sensor
+5V Fusing Power Supply Board
+5V Paper Width,Length,End Sensor
+5V Sorter
+5V Optics Board
GND Paper Size Switch
GND Auto ID Sensor
GND Master Sensor
GND Key Counter
GND Fusing Power Supply Board
GND Paper Width,Length,End Sensor
GND Sorter
GND Optics Board
GND Document Feeder
Paper Size 1
Paper Width 1
Key 1
Paper Size 2
Paper Width 2
Key 2
Toner End Sensor
Paper Size 3
Paper Width 3
Key 3
Toner Near Overflow
Toner Overflow
Paper Feed Sensor
Regist. Adj. 1
Paper Size 4
Original Set
Key 4
Paper Tray Sensor
Master Sensor
Relay Feed Sensor
Regist Adj 2
Paper Size 5
Paper End
Original Misfeed
Key 5
Paper Length 1
Exit Sensor
Hi.Temp.
Regist Adj 3
Key Counter Set
Sorter Mode
Original Ready
Paper Length 2
Coin Lock
Power Pack-Bias
Quenching Lamp
TxD
RxD
Home Position
Home Position
Lamp Voltage
Auto ID
Auto ID Sensor
Thermistor (Fusing)
Lamp Voltage
Lamp Voltage
GND
Fusing lamp
Test Mode
Free Run
Count U D
Not Used
TC74HC00P
TD62083
TD62304
SN7407
SN7406
AN6914
+5V
+24V Test Pin
+5V Jumper (Back up) Wire


+5V Encoder
CN702-1
Phase A
CN702-2
Phase B
CN702-3
GND Encoder
CN702-4
R705 1K
R706 1K
R715 3.3K
R716 3.3K
IC707
C710
C709
C707
C706
IC706 μPD 7811G
C1 (PC5)
PC 6
NMI
INT 1
Vcc
VDD
VAREF
VAcc
Vss
AVss
C714
TxD
CN706-2
RxD
CN706-1
Reset
CN706-5
R726 3.3K
IC705
TxD (PC0)
RxD (PC1)
PC2
PC3
PC7
RESET
R725 10K
C713
R723 3.3K
MODE 1
MODE 0
PF 6
PF 7
PF 2
PF 3
PF 5
ALE
R719 4.7K
R720 4.7K
N.C
+5V Lens H.P.
CN705-1
Slider H.P.
CN706-6
Lens H.P.
CN705-2
GND Lens H.P.
CN705-3
R718 3.3K
R722 3.3K
R721 22K
R717 22K
C712
C711
PB 4
PB 5
PB 6
PB 7
(PC4) TO
(PD0) D0
(PD1) D1
(PD2) D2
(PD3) D3
(PD4) D4
(PD5) D5
(PD6) D6
(PD7) D7
RD
WR
(DF0) A0
(DF1) A1
(DF4) CS
RAY701
4.7K x8 1/8W
DPS701
PB 3
PB 2
PB 1
PB 0
AN 4
AN 5
AN 6
AN 7
RAY702
4.7K x4 1/8W
DPS702
AN 3
AN 2
AN 1
AN 0
PA 0
PA 1
PA 2
PA 3
PA 4
PA 5
PA 6
PA 7
R714 4.7K
R713 4.7K
R712 4.7K
R711 4.7K
+24V Dc Power Supply Board
CN703-1
GND Dc Power Supply Board
CN703-2
ZD701
IC702
C703
X1
X2
R724 1M
OSC701
10MHz
C715
C716
+5V Main Board
CN706-3
GND Main Board
CN706-4
C717
IC705
C705
IC704
C704
IC707
C708
IC704
IC704
IC705
N.C
MP 4503
R701 2.7K
R703 2.7K
C701
R707 2.7K
Q701
Q702 C458
R710 2.7K
IC704
R702 10K
R708 33K
Q704 C458
IC705
R709 33K
Q703
IC704
R704 10K
IC705
IC701 μPD8253-2
CLK1
CLK2
CLK0
OUT0
OUT1
GATE2
OUT2
Vcc
GATE1
GATE0
Vss
C702
VAA
IC705
IC702
IC702
IC702
IC702
CN701-1
Slider Motor
CN701-2
Slider Motor
CN704-1
+24V Lens Motor
CN704-5
Lens Motor
CN704-3
Lens Motor
CN704-4
Lens Motor
CN704-2
Lens Motor
CN704-6
+24V Lens Motor

9-4. Schematic-Interface Board Type C

August 1, 1985



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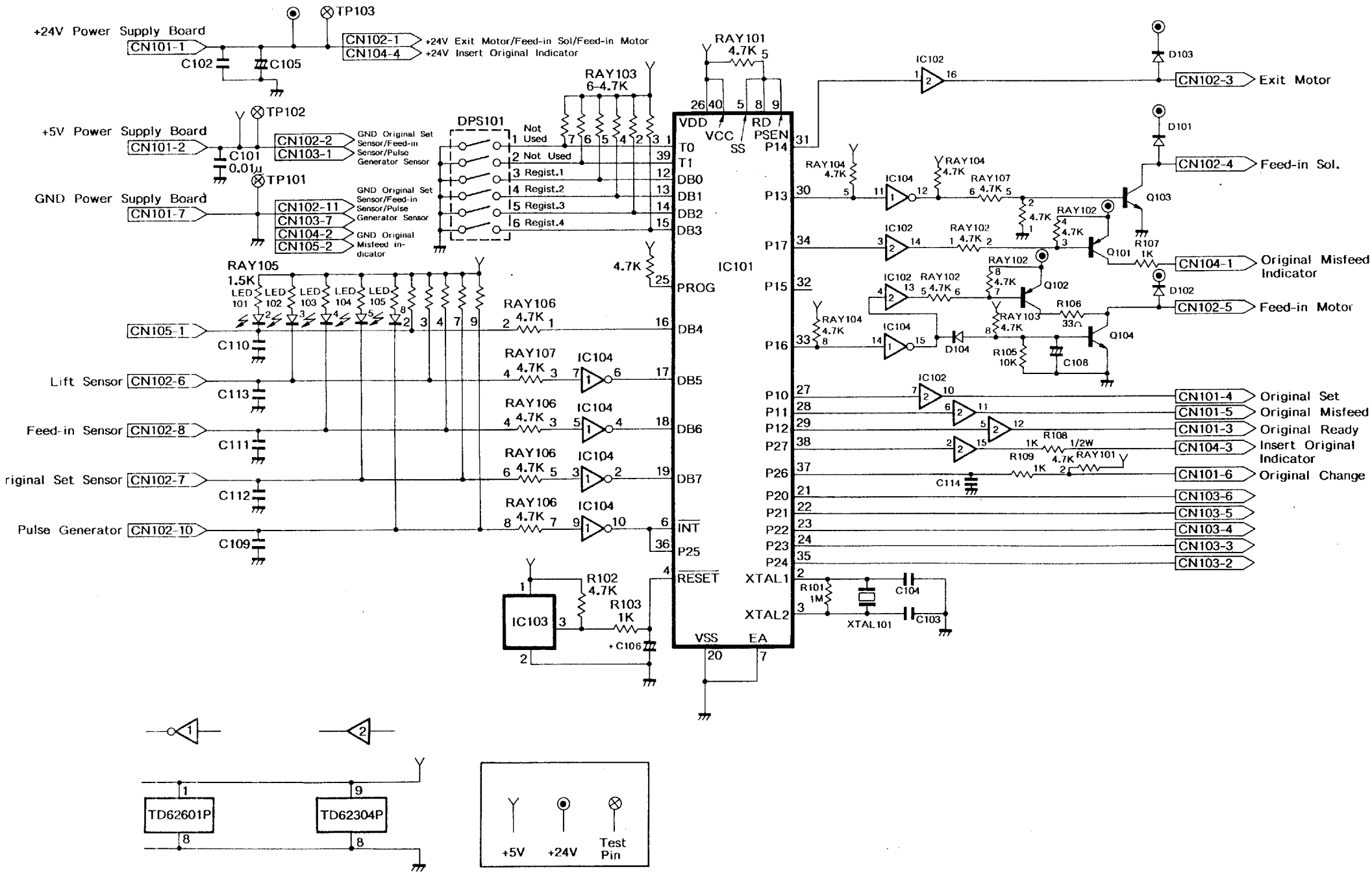
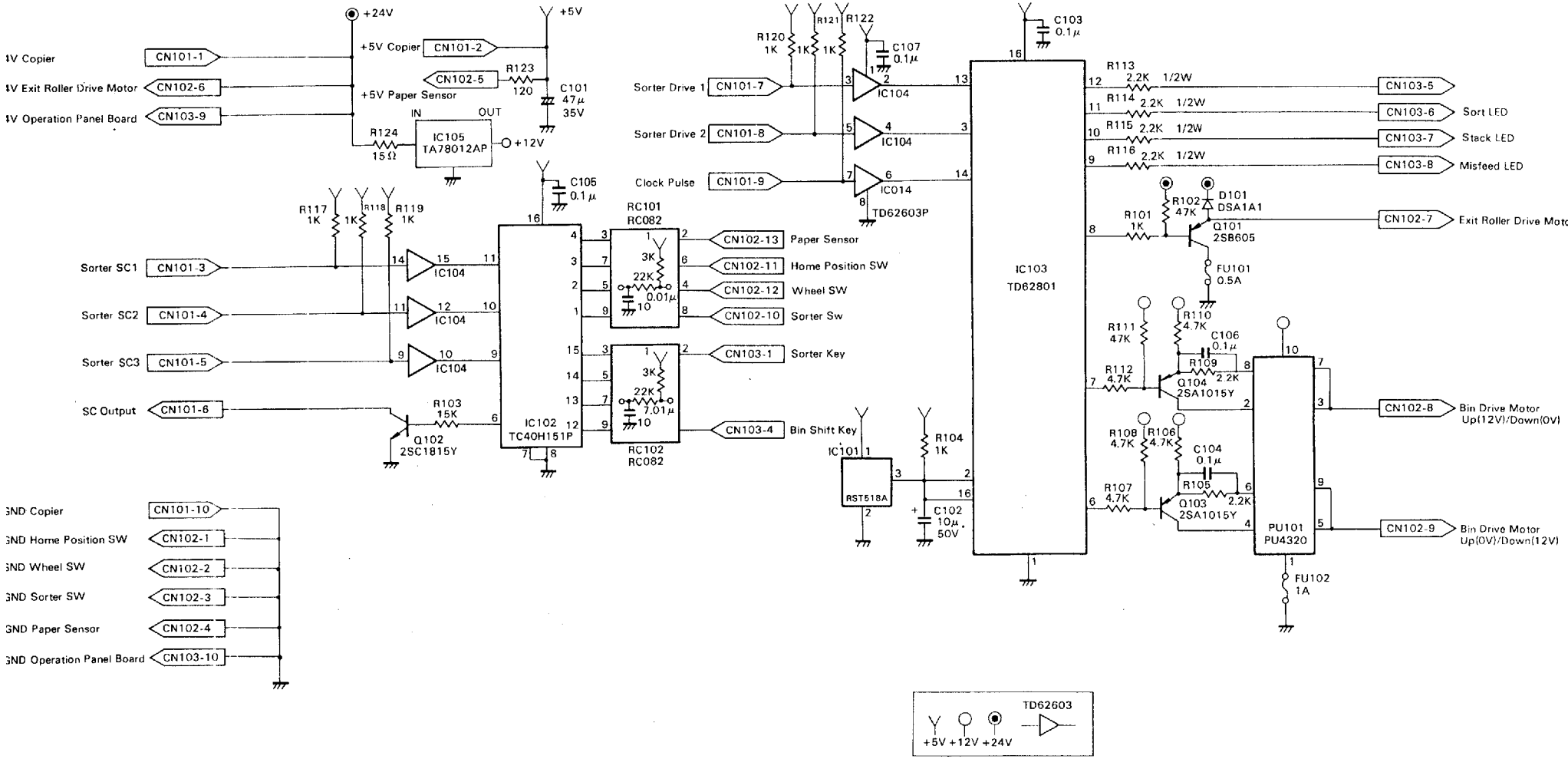
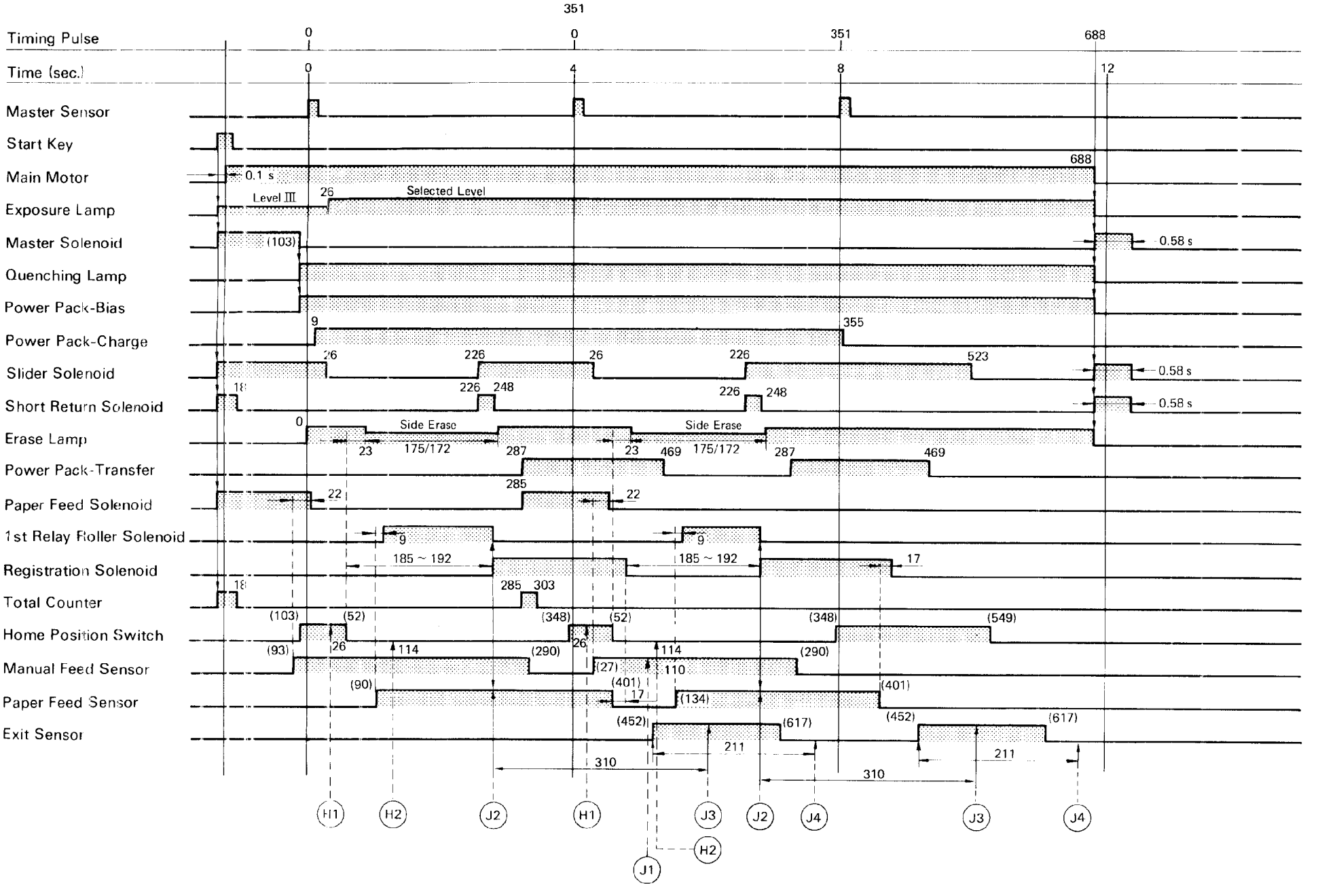

+24V Power Supply Board
CN101-1
C102
C105
TP103
CN102-1
+24V Exit Motor/Feed-in Sol/Feed-in Motor
CN104-4
+24V Insert Original Indicator
+5V Power Supply Board
CN101-2
C101
0.01μ
TP102
CN102-2
CN103-1
GND Original Set Sensor/Feed-in Sensor/Pulse Generator Sensor
GND Power Supply Board
CN101-7
TP101
CN102-11
CN103-7
CN104-2
CN105-2
GND Original Misfeed indicator
DPS101
Not Used
Not Used
Regist.1
Regist.2
Regist.3
Regist.4
RAY103 6-4.7K
RAY101 4.7K
RAY105 1.5K
LED 101
LED 102
LED 103
LED 104
LED 105
CN105-1
C110
Lift Sensor
CN102-6
C113
Feed-in Sensor
CN102-8
C111
riginal Set Sensor
CN102-7
C112
Pulse Generator
CN102-10
C109
RAY106 4.7K
RAY107 4.7K
IC104
R102 4.7K
R103 1K
+C106
IC103
4.7K
IC101
VDD
VCC
SS
RD
PSEN
T0
T1
DB0
DB1
DB2
DB3
PROG
DB4
DB5
DB6
DB7
INT
P25
RESET
VSS
EA
P14
P13
P17
P15
P16
P10
P11
P12
P27
P26
P20
P21
P22
P23
P24
XTAL1
XTAL2
IC102
D103
CN102-3
Exit Motor
D101
CN102-4
Feed-in Sol.
RAY104 4.7K
RAY107 4.7K
Q103
RAY102 4.7K
Q101
R107 1K
CN104-1
Original Misfeed Indicator
Q102
D102
CN102-5
Feed-in Motor
R106 33Ω
Q104
R105 10K
C108
D104
CN101-4
Original Set
CN101-5
Original Misfeed
CN101-3
Original Ready
R108 1K 1/2W
CN104-3
Insert Original Indicator
R109 4.7K
RAY101 1K
CN101-6
Original Change
C114
CN103-6
CN103-5
CN103-4
CN103-3
CN103-2
R101 1M
C104
C103
XTAL101
TD62601P
TD62304P
+5V
+24V
Test Pin


+24V
+5V
+5V Copier
CN101-1
CN101-2
+5V Exit Roller Drive Motor
CN102-6
CN102-5
R123
120
C101
47μ
35V
+5V Paper Sensor
+5V Operation Panel Board
CN103-9
IN
OUT
R124
15Ω
IC105
TA78012AP
+12V
C105
0.1μ
R117
1K
R118
1K
R119
1K
RC101
RC082
Sorter SC1
CN101-3
Sorter SC2
CN101-4
Sorter SC3
CN101-5
SC Output
CN101-6
IC104
IC102
TC40H151P
R103
15K
Q102
2SC1815Y
CN102-13
Paper Sensor
CN102-11
Home Position SW
CN102-12
Wheel SW
CN102-10
Sorter Sw
CN103-1
Sorter Key
CN103-4
Bin Shift Key
RC102
RC082
3K
22K
0.01μ
7.01μ
10
GND Copier
CN101-10
GND Home Position SW
CN102-1
GND Wheel SW
CN102-2
GND Sorter SW
CN102-3
GND Paper Sensor
CN102-4
GND Operation Panel Board
CN103-10
R120
1K
R121
1K
R122
1K
C107
0.1μ
Sorter Drive 1
CN101-7
Sorter Drive 2
CN101-8
Clock Pulse
CN101-9
IC014
TD62603P
IC101
RST518A
R104
1K
C102
10μ
50V
C103
0.1μ
IC103
TD62801
R113
2.2K
1/2W
R114
2.2K
1/2W
R115
2.2K
1/2W
R116
2.2K
1/2W
CN103-5
CN103-6
Sort LED
CN103-7
Stack LED
CN103-8
Misfeed LED
R102
4.7K
D101
DSA1A1
R101
1K
Q101
2SB605
CN102-7
Exit Roller Drive Moto
FU101
0.5A
R111
4.7K
R110
4.7K
C106
0.1μ
R109
2.2K
R112
4.7K
Q104
2SA1015Y
CN102-8
Bin Drive Motor
Up(12V)/Down(0V)
R108
4.7K
R106
4.7K
C104
0.1μ
R105
2.2K
R107
4.7K
Q103
2SA1015Y
PU101
PU4320
CN102-9
Bin Drive Motor
Up(0V)/Down(12V)
FU102
1A
TD62603
+5V +12V +24V

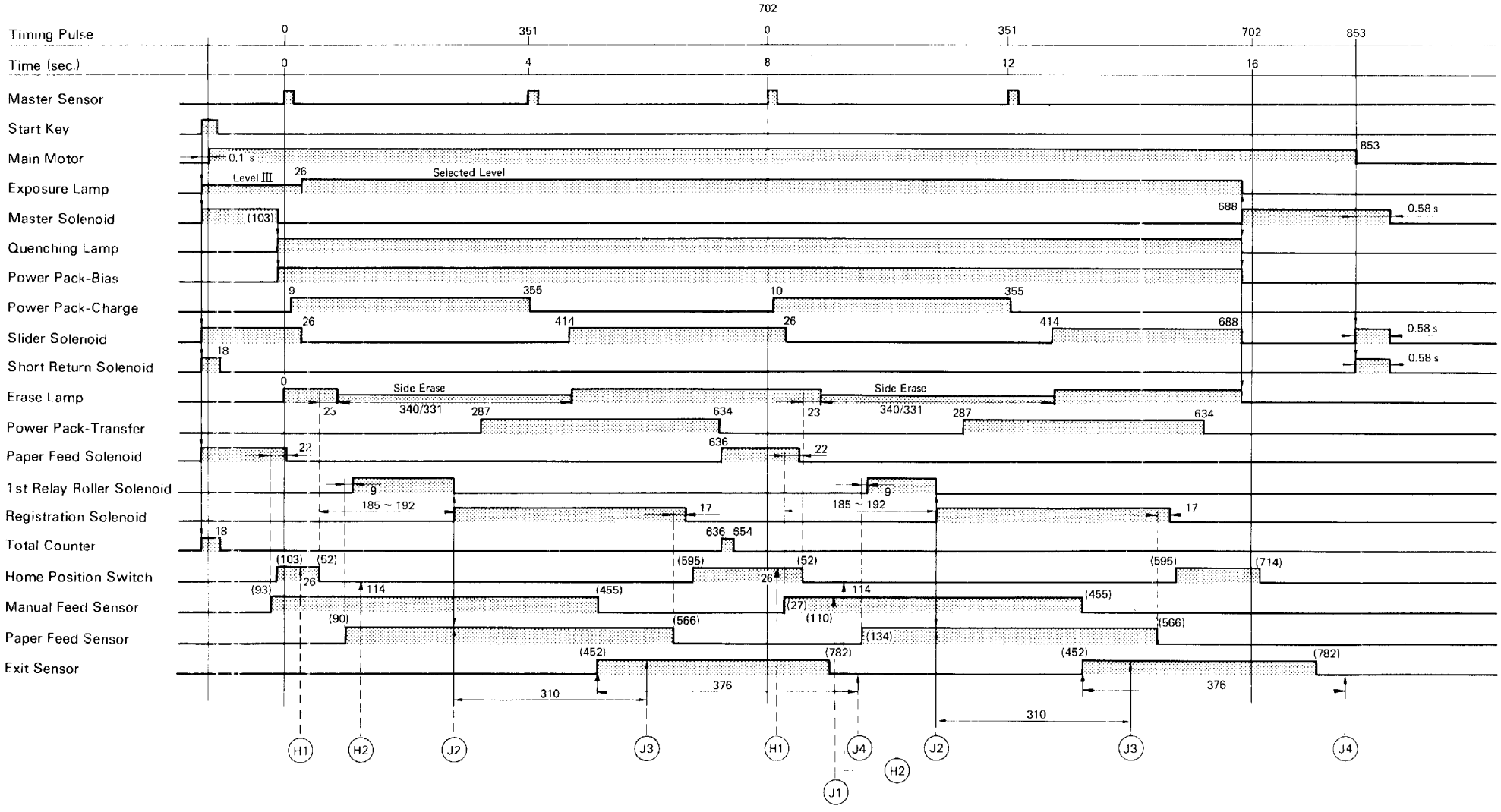
[11" x 8-1/2"/A4 Sideways]

Process Speed = 115 mm/sec.
1 Pulse = 1.3 mm, 11.4 ms



[11" x 17"/A3]

Process Speed = 115 mm/sec.
1 Pulse = 1.3 mm, 11.4 ms



1. Side Erase Timing

Paper Size	Pulse Count
11" x 17"	340
A3	331
B4	288
8"(8-1/4") x 13"	262
A4 Lengthwise	237
8-1/2" x 11"	223
8" x 10-1/2"	214
B5 Lengthwise	206
11" x 8-1/2"	175
A4 Sideways	172
B5 Sideways	149
A5 Sideways	123

2. Registration Timing
(Adjustable by changing DPS101-1, -2, and -3)

DIP101-1	DIP101-2	DIP101-3	Pulse Count
OFF	OFF	OFF	192
ON	OFF	OFF	191
OFF	ON	OFF	190
ON	ON	OFF	189
OFF	OFF	ON	188
ON	OFF	ON	187
OFF	ON	ON	186
ON	ON	ON	185

JAM CHECK
- J1 : Manual Feed Sensor ON Check
- J2 : Paper Feed Sensor ON Check
- J3 : Exit Sensor ON Check
- J4 : Exit Sensor OFF Check

HOME POSITION CHECK
- H1 : Home Position Switch ON Check
- H2 : Home Position Switch OFF Check

[11" x 8-1/2"/A4 Sideways]

Process Speed = 115 mm/sec.
1 Pulse = 1.3 mm, 11.4 ms

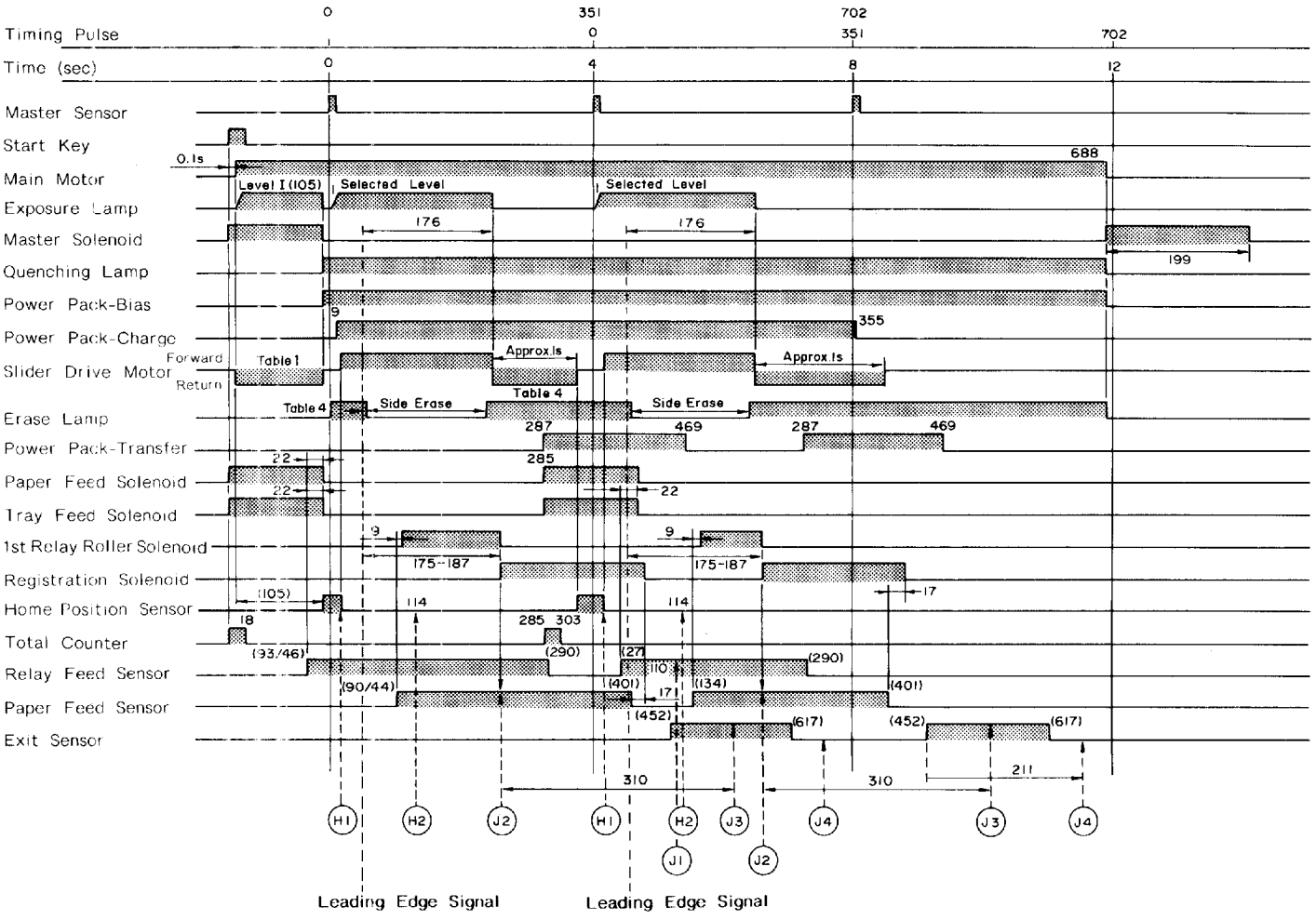


Table 5. Trailing Erase ON

(A4/11"x8-1/2")

Reproduction Ratio (%)	Pulse Count
65	222
66	225
67	229
68	232
69	235
70	238
71	242
72	245
73	248
74	251
75	255
76	258
77	261
78	265
79	268
80	271
81	274
82	278
83	281
84	284
85	288
86	291
87	294
88	297
89	301
90	304
91	307
92	311
93	314
94	317
95	320
96	324
97	327
98	330
99	334
100 - 141	337

From leading edge erase OFF

(A3/11"x17")

Reproduction Ratio (%)	Pulse Count
65	21
66	21
67	20
68	20
69	20
70	19
71	19
72	19
73	19
74	18
75	18
76	18
77	18
78	18
79	17
80	17
81	17
82	17
83	17
84	17
85	17
86 - 141	16

From slider return timing

Note: Between table 5

[11" x 17"/A3]

Process Speed = 115 mm/sec.
1 Pulse = 1.3 mm, 11.4 ms

Note : Between table 5 and 6, the earliest timing takes priority.

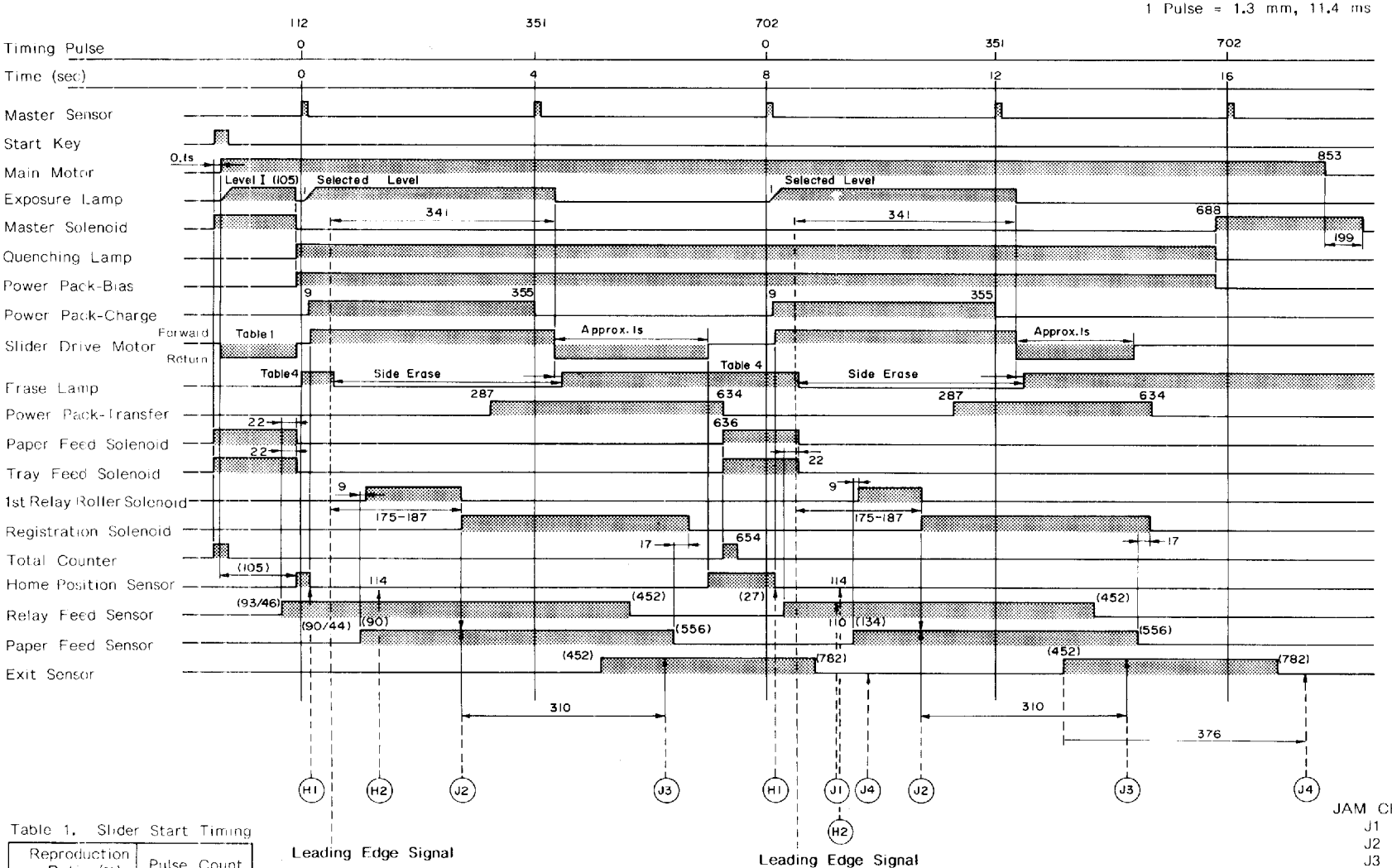


Table 6. Trailing Erase ON

Paper Size	Pulse Count
8"x13"	256
8-4/1"x13"	256
8-1/2"x11"	226
8-1/2"x13"	256
8-1/2"x14"	275
10"x14"	275
10"x15"	294
11"x17"	333
B5 Lengthwise	199
A4 Lengthwise	230
B4	281
A3	324
5-1/2"x8-1/2"	168
8-1/2"x5-1/2"	110
11"x8 1/2"	168
A6 Lengthwise	116
B6 Lengthwise	142
A5 Lengthwise	163
A5 Sideways	116
B5 Sideways	142
A4 Sideways	163

From leading edge erase OFF

JAM CHECK
J1 : Relay Feed Sensor ON Check
J2 : Paper Feed Sensor ON Check
J3 : Exit Sensor ON Check
J4 : Exit Sensor OFF Check

HOME POSITION CHECK
H1 : Home Position Sensor ON Check
H2 : Home Position Sensor OFF Check

Table 1. Slider Start Timing

Reproduction Ratio (%)	Pulse Count
65 - 67	30
68 - 74	29
75 - 84	28
85 - 91	27
92 - 96	26
97 - 100	25
101 - 104	24
105 - 107	23
108 - 110	22
111 - 115	21
116 - 117	20
118 - 119	19
120 - 122	18
123 - 125	17
126 - 127	16
128 - 130	15
131 - 132	14
133 - 135	13
136 - 137	12
138 - 139	11
140 - 141	10

From master sensor ON

Table 2. Registration Timing

Reproduction Ratio (%)	Pulse Count
65 - 66	187
67 - 69	186
70 - 74	185
75 - 81	184
82 - 89	183
90 - 119	182
120 - 127	183
128 - 135	184
136 - 141	185

From leading edge signal

Table 3. Registration Timing Adjustment (DPS101)

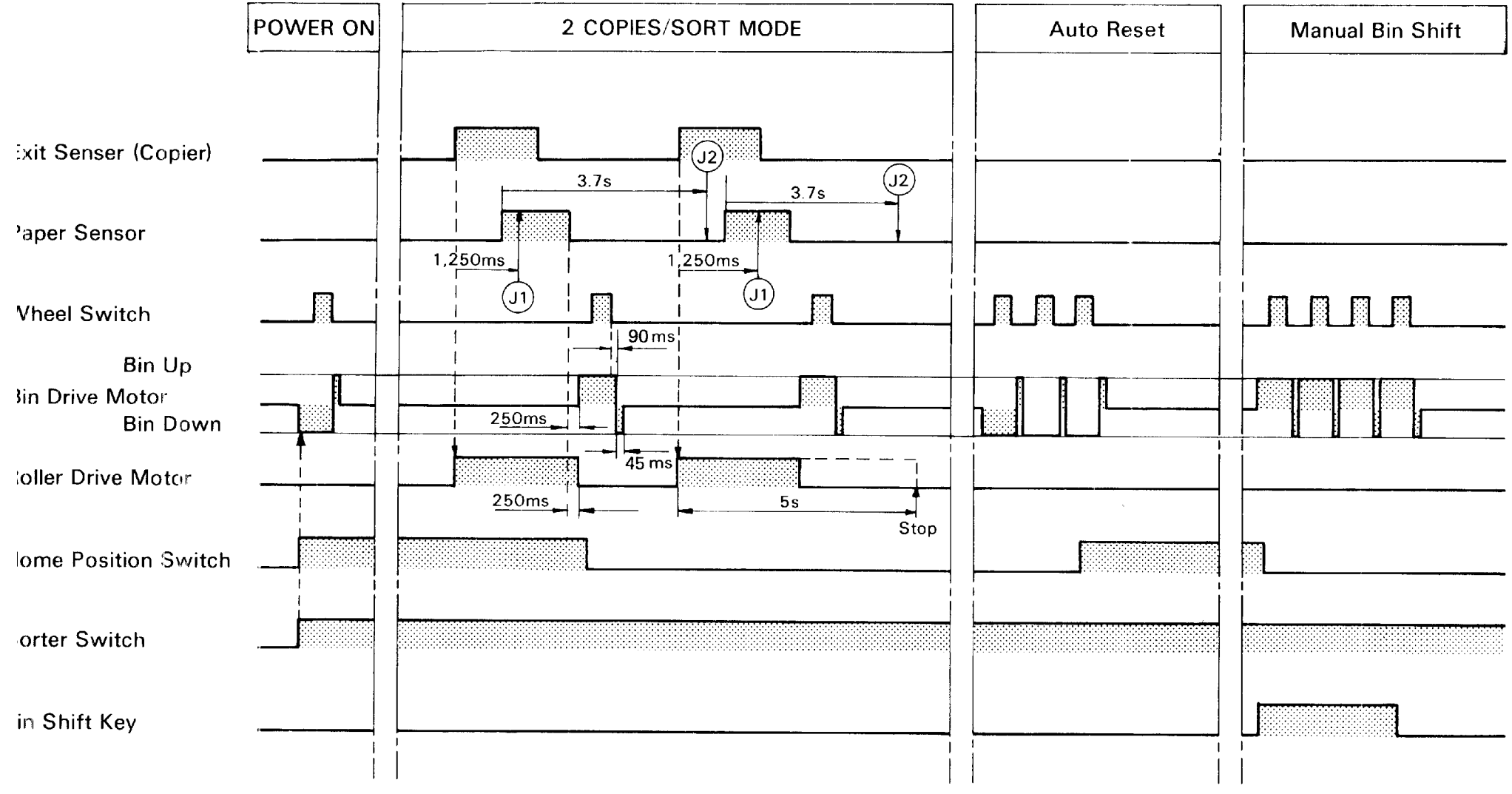
3	2	1	Pulse Count Change
OFF	OFF	OFF	0
OFF	OFF	ON	1
OFF	ON	OFF	2
OFF	ON	ON	3
ON	OFF	OFF	4
ON	OFF	ON	5
ON	ON	OFF	6
ON	ON	ON	7

Table 4. Leading Erase OFF (DPS701)

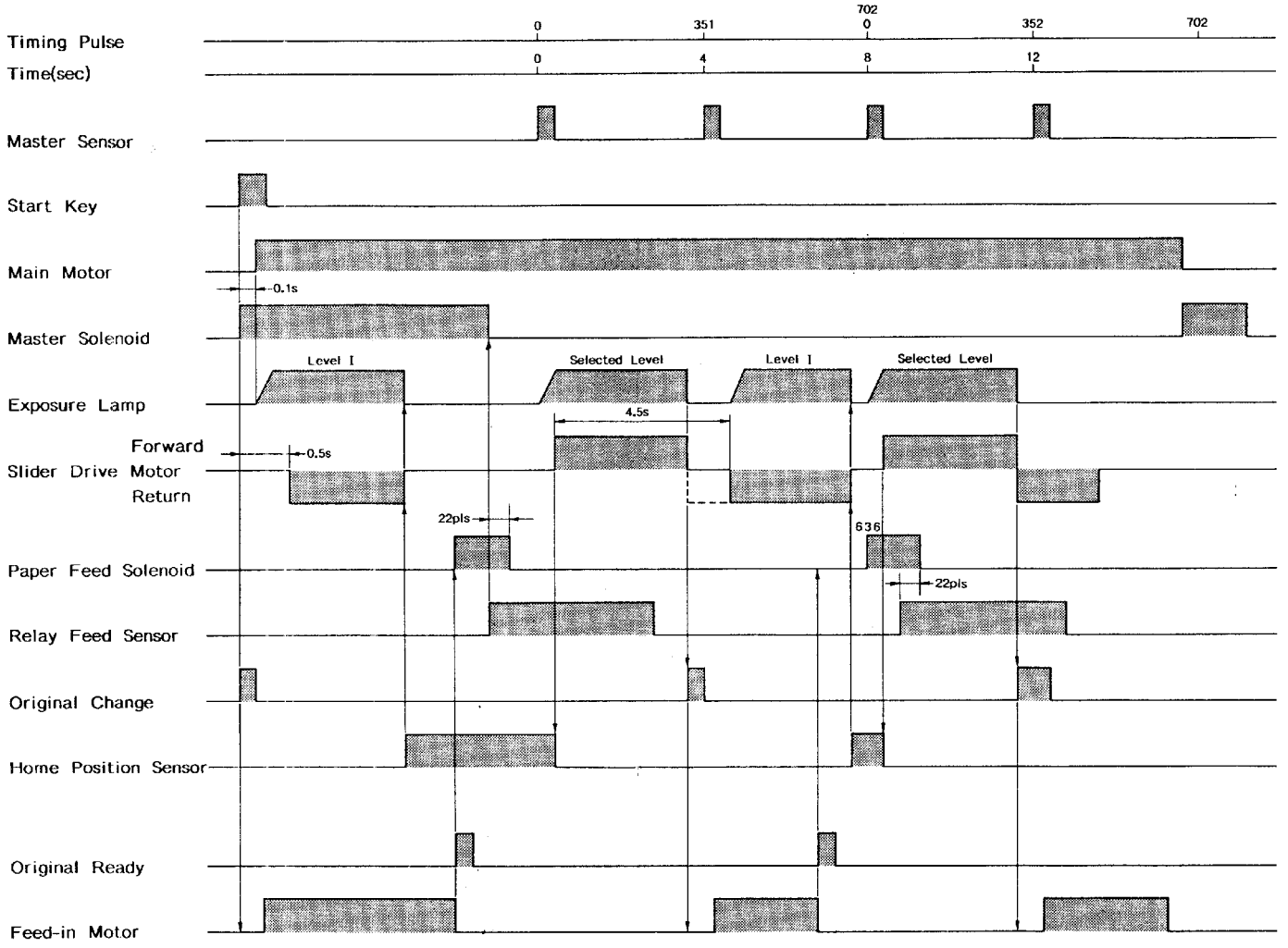
3	2	1	(ms)
ON	ON	ON	51
OFF	ON	ON	44
ON	OFF	ON	37
OFF	OFF	ON	30
ON	ON	OFF	23
OFF	ON	OFF	17
ON	OFF	OFF	10
OFF	OFF	OFF	3

From leading edge signal

Regist.Timing = Pulse Count(Table 2)-Pulse Count Change(Table 3)



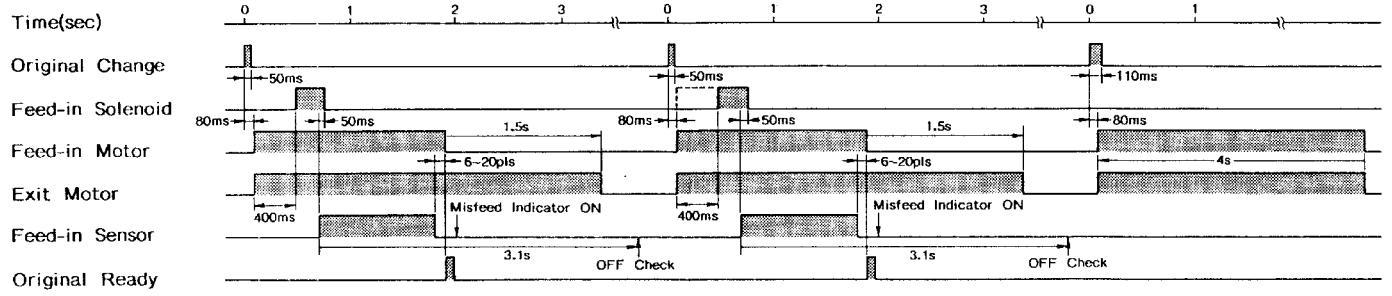
JAM CHECK
J1 : Paper Sensor ON Check
J2 : Paper Sensor OFF Check



---- Full Return Mode

Feed Speed = 190mm/s

1 Pulse = 1.1mm,6ms



---- Long Original Mode

Registration Timing
(Adjustable by changing DPS101-3,-4,-5,and-6.)

3	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
4	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	
5	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	
6	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	
Pls	13	12	11	10	9	8	7	6	F.R.	14	15	16	17	18	19	20	

0 : OFF
1 : ON

RICOH

RICOH FT2010/M100

FIELD SERVICE MANUAL

RICOH COMPANY LTD.

CONTENTS

SECTION 10: INSTALLATION REQUIREMENTS
SECTION 11: UNPACKING AND INSTALLATION
SECTION 12: PREPARATIONS FOR TRANSPORTING THE COPIER
SECTION 13: SERVICE TABLES AND REMARKS
SECTION 14: REPLACEMENT AND ADJUSTMENT
SECTION 15: TROUBLES-HOOTING
SECTION 16: ELECTRICAL DATA

SECTION 10

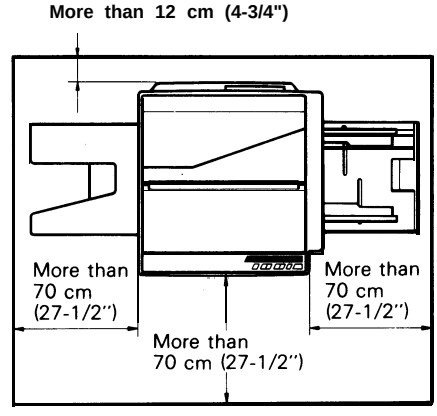
INSTALLATION REQUIREMENTS

10-1. Environment

1. **Temperature Range : 10°C to 30°C (50°F to 86°F)**
2. **Humidity Range : 15% to 90% RR**
3. **Ambient Illumination : Less than 1,500 luxs (Do not expose to direct sunlight)**
4. **Ventilation : Room air should turn over at least 3 times/hour.**
5. **Ambient Dust : Less than 0.15mg/m³ (4×10^{-3} oz/yd³)**
6. **Room Size : More than 10m³ (13.4 yd³)**
7. **If the installation place is air-conditioned or heated, place the machine:**
   a. **Where it will not be subjected to sudden temperature changes from low to high, or vice versa.**
   b. **Where it will not be directly exposed to cool air from an air conditioner in the summer.**
   c. **Where it will not be directly exposed to reflected heat from a space heater in winter.**
8. **Avoid placing the copier in an area filled with corrosive gas.**
9. **Avoid any area higher than 2,000m (6,500 feet) above sea level.**
10. **Place the copier on a strong and level base.**
11. **Avoid any area where the copier may be subjected to frequent strong vibration.**

10-2. Minimum Space Requirements

1. Front : 70cm (27-1/2")
2. Back : 12cm (4-3/4")
3. Right : 70cm (27-1/2")
4. Left : 70cm (27-1/2")



10-3. Power Source

1. Input voltage level

   110V/60Hz : More than 11A
   115V/60Hz : More than 11A
   220V/50Hz : More than 6A
   240V/50Hz : More than 6A

2. Permissible voltage fluctuation : ± 10%

3. Permissible extension cord:

   At least 300V, 30A capacity and less than 5m (16.4") long.

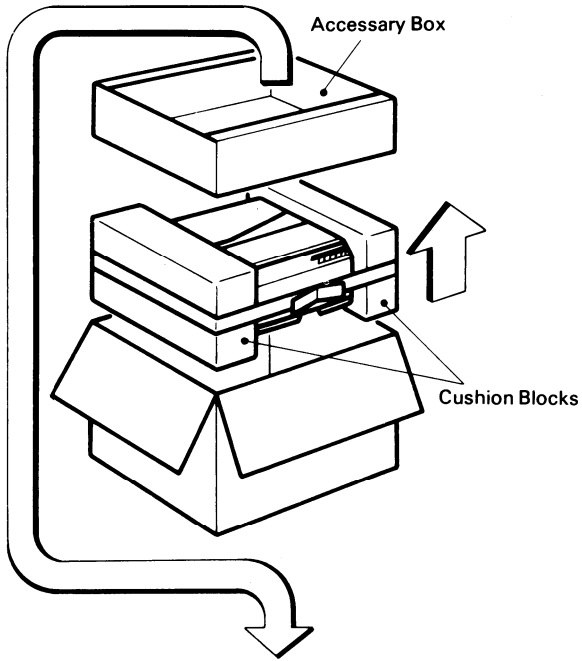
Note: 1. Be sure to ground the machine. (Do not connect the grounding wire to a gas pipe.
2. Make sure the plug is firmly inserted in the outlet.
3. Avoid multi-wiring.
4. Do not set any thing on the power cord.

SECTION 11

UNPACKING AND INSTALLATION

11-1. Unpacking Procedure

1. **Take out the accessory box and the machine.**
2. **Remove the two cushion blocks.**
3. **Open the vinyl bag and take out the machine.**



4. Check that the accessories are in the quantities according to the following list.

1) Copy Tray 1pc

2) **PaperTray 1pc**

3) **Master Unit 1pc**

Note: Keep it in the box until installing it in the copier.

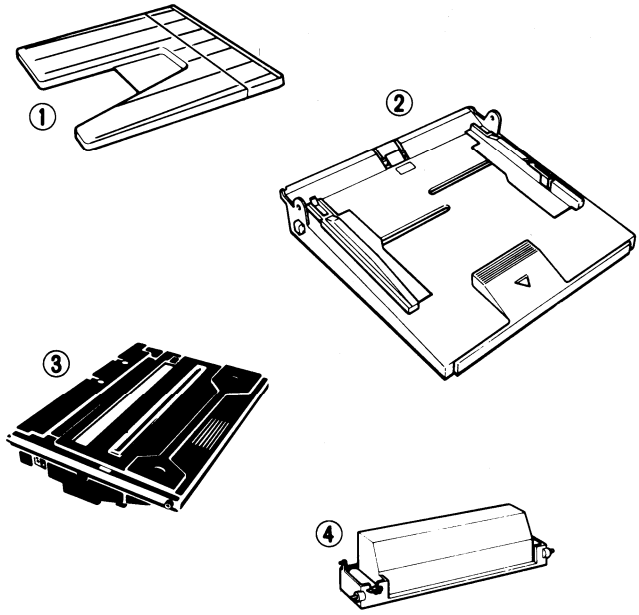
4) **Toner . . . . . 1 cartridge (Black)**

5) Operating Instructions . . . . . 1 pc

6) N.E.C.R 1pc

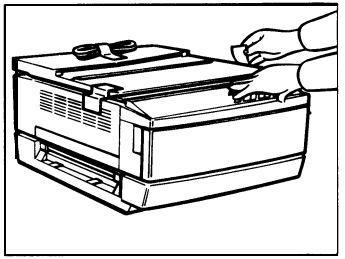
7) Envelope for N.E.C.R. (USA only) . . . . . 1 pc

8) Multi-lingual Decal (220/240V only) . . 1 pc

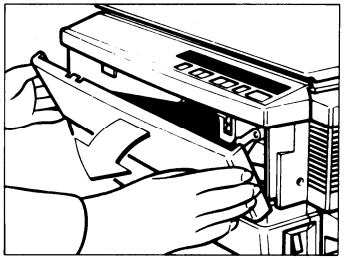


11-2. Installation Procedure

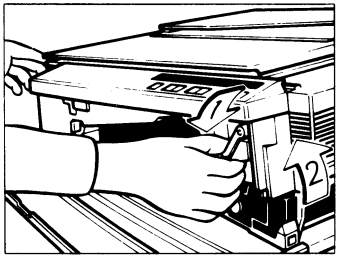
1. **Remove the three strips of tape.**



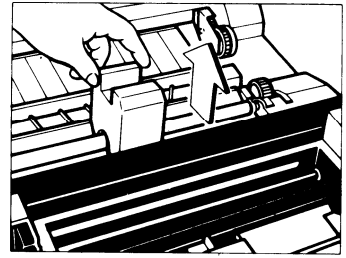
2. **Open the front 'cover.**



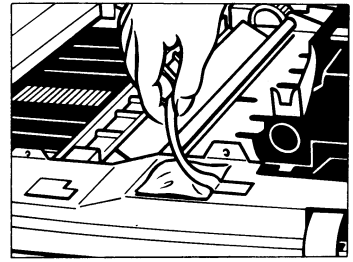
3. **Move the slider to the center and push down the release lever to open the top unit.**



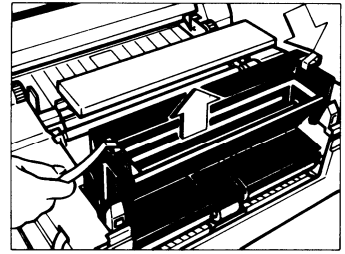
4. Remove the roller retainer.



5. Remove the silica gel.

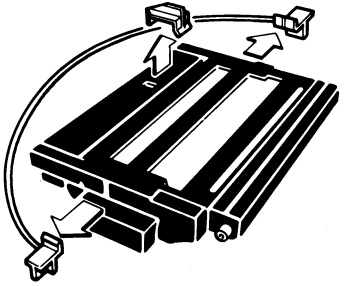


6. **Remove the toner tank cover and the two strips of tape.**

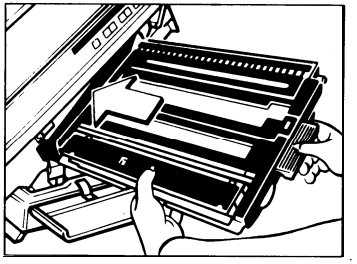


7. Remove the three wedges from the new master unit.

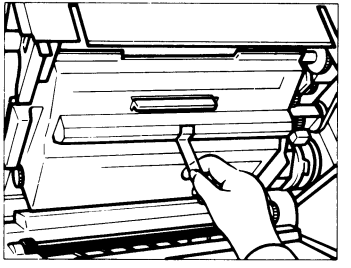
Note: **Do not touch the master (purple material) and avoid exposing it to light.**



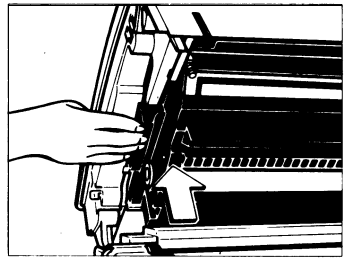
8. **Insert the master unit into the copier.**



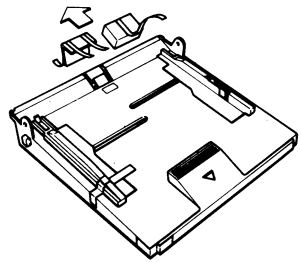
9. Peel off the polyester cover that protects the master.



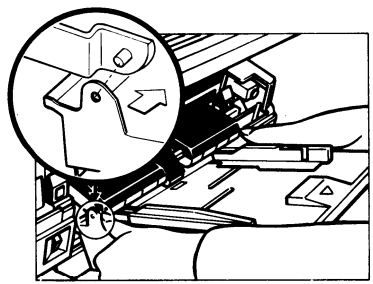
10. Push the master unit up until it locks in place.



11. Remove the cushion block, the friction pad cover, and two strips of tape from the paper tray.

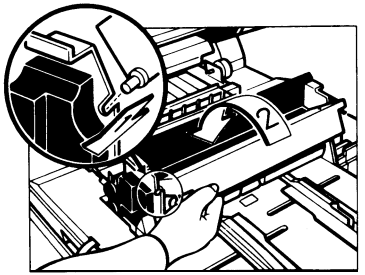


12. Install the paper tray on the right side of the machine.



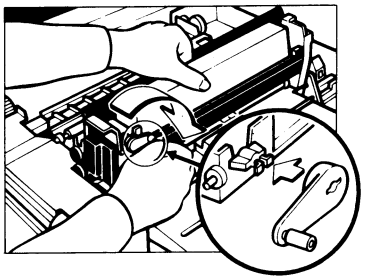
13. **Shake the new cartridge of toner well.**

14. **Set the pins of the toner cartridge into the slots on the development unit. Then, turn the cartridge counterclockwise.**

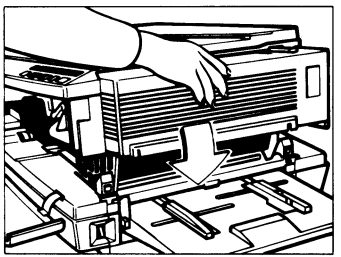


15. **Install the cartridge crank onto the shaft and turn the cartridge crank clockwise to strip off the cartridge seal.**
    Then, remove the cartridge crank and lower the top unit.

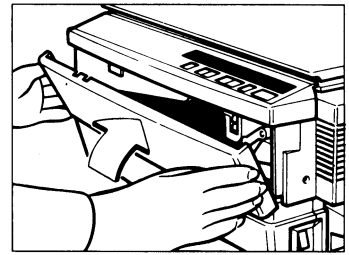
Note: **At installation, it is recommended to load two cartridges of toner.**



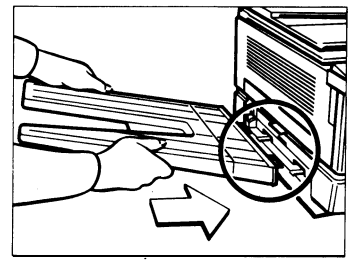
16. **Lower the top unit.**



17. Close the front cover.

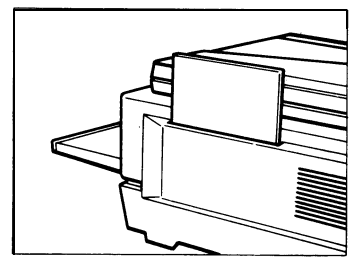


18. Install the copy tray on the left side of the machine.



19. When not using this instruction booklet, place it in the holder on the back of the copier.

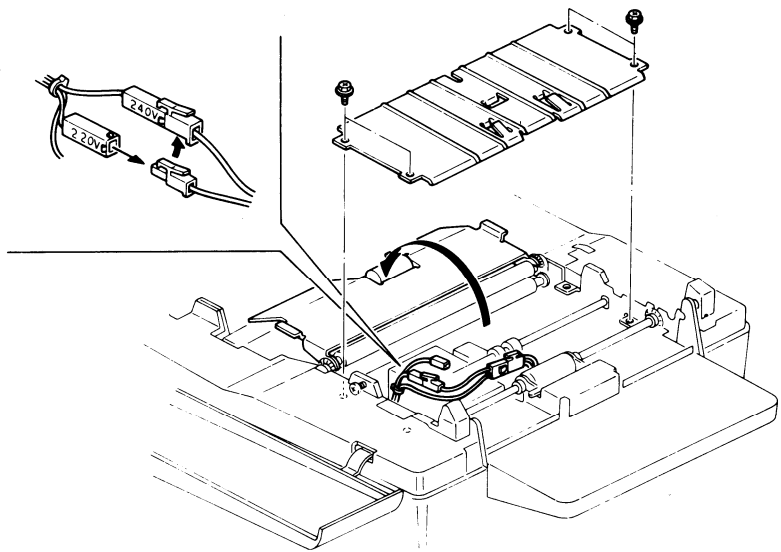
20. Check machine operation and copy quality. Fill out the New Equipment Condition Report.



This completes machine installation.

11-3. Main Transformer Conversion (220 to 240V only)

1. **Open the top unit and remove the development unit.**
2. **Swing up the upper feed guide (1 screw).**
3. **Remove the lower feed guide (4 screw).**
4. **Uncouple the 220V connector and couple the 240V connector.**



11-4. Key Counter Holder Installation

Note:
Three types of counters are recommended for this copier (Ricoh, Hecon, and Hengstler key counters).

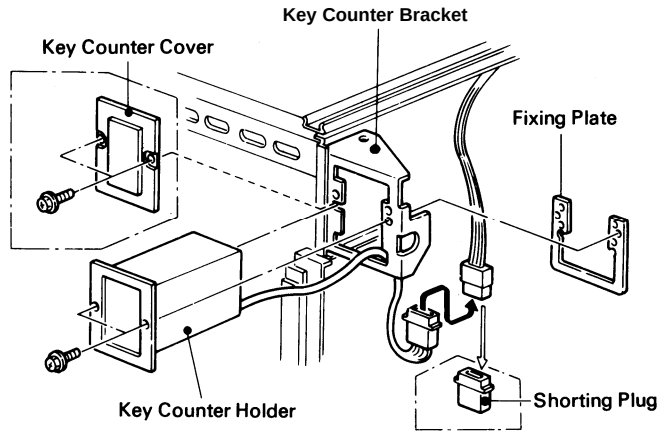
1. **Remove the upper right cover (4 screws.)**
2. **Remove the key counter cover and fixing plate from the key counter bracket (2 screws).**
3. **Hold the fixing plate on the inside of the key counter bracket and insert the key holder.**
4. **Align the holes in the fixing plate with the mounting holes of the key counter holder and secure the key counter holder.**

Note: **The fixing plate has three sets of holes. Make sure to use the holes that match the type of counter when installing.**

5. **Remove the shorting plug from the key counter connector.**

Note: **This shorting plug is usually on the harness.**

6. **Plug in the key counter harness.**
7. **Reassemble the copier. Insert the key counter and check its operation.**



SECTION 12

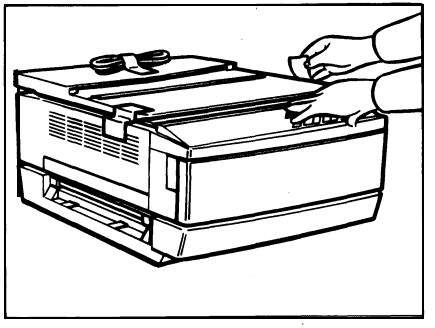
PREPARATIONS FOR TRANSPORTING THE COPIER

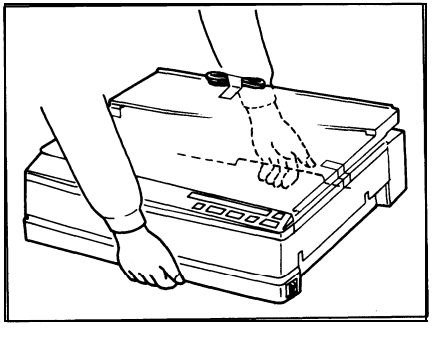
Before moving the copier from its place of installation, be sure to prepare it for transportation as follows. The copier may be badly damaged if it is moved without proper preparation.

12-1. Short Distance (Room to Room)

1. **Remove the copy tray and paper tray.**
2. **Secure the slider and power supply cord with strips of tape.**

CAUTION: * When transporting the copier, always use the grips on the front and rear to handle the copier.

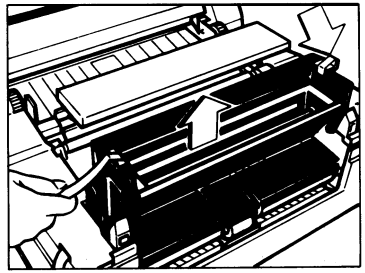


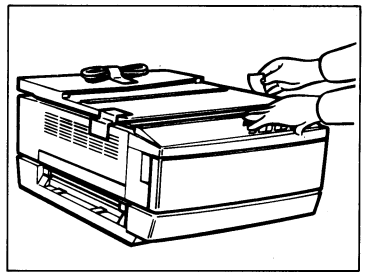


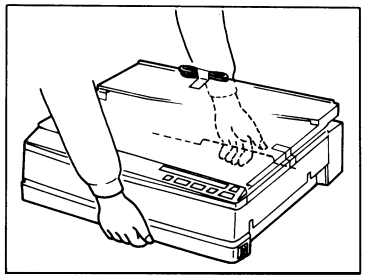
12-2. Long Distance (by vehicle)

1. Remove the copy tray and paper tray.
2. Open the clamshell and secure the development unit with strips of tape.
3. Secure the slider and power supply cord with strips of tape.

CAUTION : * While transporting the copier, always cover the copier to avoid direct sunshine.
* When the copier is in a vehicle,do not expose it to extreme hot or cold conditions.
* When transporting the copier, always use the grips on the front and rear to handle the copier.





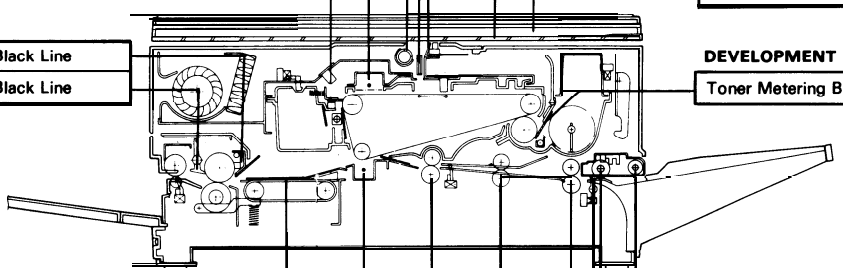


SECTION 13

SERVICE TABLES AND REMARKS

13-1. Maintenance Guide

NOTE: This guide shows the items to be cleaned and their effect on the copies if they are not clean. Clean these items as per the maintenance table.



CHARGE CORONA

Charge Corona Wire	White Stripes

QUENCHING

Quenching Lamp	Dirty Copies

FUSING

Thermistor (Fusing)	Black Line
Hot Roller Strippers	Black Line

TRANSPORT

Upper Transport Guide Plate	Dirty Copies

TRANSFER CORONA

Transfer Corona Wire	Faint Copies

OPTICS & EXPOSURE

Exposure Lamp	Dirty Copies
Fiber Optics	Faint Copies
Reflector	Dirty Copies
Exposure Glass	Dirty Copies
Platen Cover Sheet	Dirty Copies

DEVELOPMENT

Toner Metering Blade	White Stripes

PAPER FEED

Pick-up Roller	Misfeed
Tray Feed Roller	Misfeed
Tray Friction Pad	Double Feed
First Relay Roller	Misfeed
Second Relay Roller	Misfeed
Registration Roller	Registration Bad

13-2. Maintenance Table

NOTE: When you visit the customer for a service call, perform the following.

SECTION	ITEM TO BE CLEANED	MATERIAL TO BE USED
Erase and Optics	1. Erase Lamp/Master Sensor	Soft Cloth (Water) or Blower Brush
	2. Fiber Optics	Fiber Optics/Corona Wire Cleaner or Silicone Cloth
	3. Exposure Glass	Soft Cloth (Glass Cleaner)
	4. Platen Cover Sheet	Soft Cloth (Water or Alcohol)
	5. Exposure Lamp	Wet Soft Cloth, then Dry Soft Cloth
	6. Reflector	Silicone Cloth
	7. Exposure Sensor/Auto ID Sensor	Blower Brush
Development and Quenching	1. Toner Metering Blade	Toner Agitator (when necessary)
	2. Quenching Lamp	Soft Cloth (Water) or Blower Brush

SECTION	ITEM TO BE CLEANED	MATERIAL TO BE USED
Paper Feed and Transport	1. 1st Relay Roller	Soft Cloth (Water)
	2. 2nd Relay Roller	Soft Cloth (Water)
	3. Registration Roller	Soft Cloth (Water)
	4. Paper Guide Plates	Soft Cloth (Water)
	5. Transport Belt	Soft Cloth (Water)
	6. Paper Tray Pads	Soft Cloth (Water)
	7. Pick-up Roller	Soft Cloth (Water)
	8. Tray Feed Roller	Soft Cloth (Water)
	9. Transport Guide Plates	Soft Cloth (Water)
Fusing	1. Hot Roller Strippers	Soft Cloth (Water)
	2. Thermistor	Soft Cloth (Alcohol)
	3. Paper Guide Plates	Soft Cloth (Water)
Corona	1. Charge Corona Wire	Fiber Optics/Corona Wire Cleaner or Blower Brush
	2. Transfer Corona Wire	Cotton Swabs or Soft Cloth (Alcohol)
	3. Corona Casings	Soft Cloth (Water)
	4. Transfer Guide Plate	Soft Cloth (Water)
Others	1. Grid Plate of Master Unit	Blower Brush

13-3. Lubrication Table

NOTE: Lubrication must be done within the number of copies indicated in the following table.

SECTION	ITEM TO BE LUBRICATED	NO. OF COPIES	LUBRICATING MATERIAL
Erase and Optics	1. Fiber Optics Holder	As Necessary	Grease-501
Paper Feed and Transport	1. 1st Relay Clutch Spring	60 K	Mobil Temp 78
	2. Registration Clutch Spring	60 K	Mobil Temp 78
	3. Tray Feed Clutch Spring	60 K	Mobil Temp 78
	4. Pick-up Clutch Spring	60 K	Mobil Temp 78
Others	1. Master Clutch Spring	60 K	Mobil Temp 78

13-4. Expected Life of Parts

NOTE: Main parts have the following expected service life.

SECTION	PART DESCRIPTION	EXPECTED SERVICE LIFE
Development	1. Toner Metering Blade	60 K (Black) 6 K (Color)
Paper Feed and Transport	1. Tray Friction Pad	60 K
Fusing	1. Hot Roller 2. Hot Roller Strippers 3. Pressure Roller	120K 120K 180K
Corona	1. Charge Corona Wire 2. Transfer Corona Wire	80 K 80 K

13-5. Special Tools and Lubricants

NO.	DESCRIPTION	PART NO.	REMARKS
1.	Positioning Ring	52169003	
2*	Test Chart OS-A3	54209502	100 sheets/set
3.	Digital Multimeter	54209507	BECKMAN RMS3030
4.	Deluxe Test Lead Accessory Kit	54209508	BECKMAN DL241
5.	Grease - Mobil Temp 78	54479078	400 g/can
6.	Grease - Shin-etsu Silicon G-501	52039502	80 g/tube

13-6. Points to Remember

Master Unit

1. Never touch the master belt and do not apply oil or an organic solvent to prevent the master belt from being deformed.
2. When the master unit is out of the machine or the upper clamshell is open, avoid exposing it to a bright light-or direct sun light to prevent the master belt from being light fatigued.
3. Always store master unit in a cool and dry place.
4. Do not leave master units in vehicles during hot weather. It does not matter whether the master units are installed in machines or separate.
5. The variable resistor for adjusting the master sensor is factory preset and should not be adjusted in the field.
6. Keep the master unit level when it is out of the copier.

Charge

1. The variable resistor (VR-C) is factory preset and should not be adjusted in the field.
2. Do not touch the corona wire with oily hands.
3. Instruct the operator how and when to use the corona wire/fiber optics cleaner.
4. Clean the corona wire at every service call.
5. Clean the grid plate with a blower brush.

Optics

1. Clean the reflector, exposure lamp, and fiber optics at every service call.
2. The variable resistor (VR - 1) on the exposure sensor board is factory preset and should not be adjusted in the field.
4. When making copy on small size paper, the paper should be slightly pushed by the small-paper holder.

Development

1. When white vertical lines appear on the copy, use the toner agitator to clean the toner metering blade.
2. Do not use the toner agitator unless copy image problems occur. This is to prevent damaging the toner metering blade.
3. Be careful not to nick or scratch the development roller surface.
4. Be careful not to use a black development unit for color copying, or a color development unit for black copying.
5. Always store toner in a cool and dry place.

Transfer

1. The variable resistor (VR-T) on the transfer/bias power pack is factory preset and should not be adjusted in the field.
2. Do not touch the transfer corona wire with oily hands.
3. Clean the transfer corona wire with a soft cloth at every service call.

Paper Feed

1. Do not allow the paper feed rollers to become oily or dirty.
2. Instruct the operator to ensure that one sheet of OHP transparency is loaded at a time and that the OHP transparency lever is down when copying onto transparencies.
3. The improper setting of side and rear fences of the paper tray may cause erase problems.

Fusing

1. Be careful not to damage the hot roller strippers.
2. Do not touch the fusing lamp with your bare hands.
3. Make sure that the fusing lamp does not contact the hot roller.
4. Clean the fusing thermistor and hot roller strippers at every service call.

SECTION 14

REPLACEMENT AND ADJUSTMENT

14-1. Exterior Removal

Upper Clamshell (refer to FT2050) 5-2

Lower Clamshell 14-2

Lower Clamshell

(1) **Front Cover (2 screws)**

1. **Open the clamshell to remove the screws.**

NOTE: * **When installing the front cover, be sure that the tabs engage with the positioning notches.**

(2) Paper Tray

1. **Open the clamshell.**
2. **Lift the paper tray and remove.**

(3) Lower Rear Cover (4 screws)

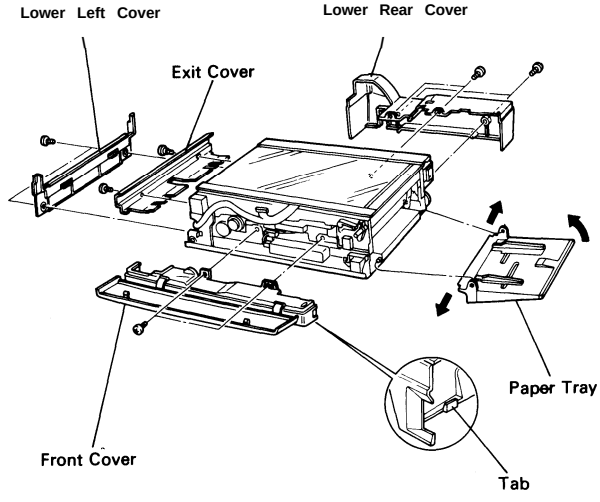
1. **Remove the upper rear cover (2 screws).**
2. **Open the clamshell and remove.**

NOTE: * **Remember that one screw is longer than the other three screws. The longer screw prevents the upper paper feed guide plate from being turned over.**

(4) Lower Left Cover (2 screws)

1. **Remove the front cover (2 screws), the upper rear cover (2 screws), and lower rear cover (4 screws) to remove the lower left cover.**

(5) **Exit Cover (2 screws)**



14-2. Erase and Optics

Erase Lamp Replacement (refer to FT2050) 5-6

Slider Removal (refer to FT2050). 5-7

Slider Drive Wire Replacement (refer to FT2050) 5-8

Fiber Optics Removal (refer to FT2050) 5-9

Exposure Lamp Unit Replacement 14-4

Slider Clutch Removal 14-5

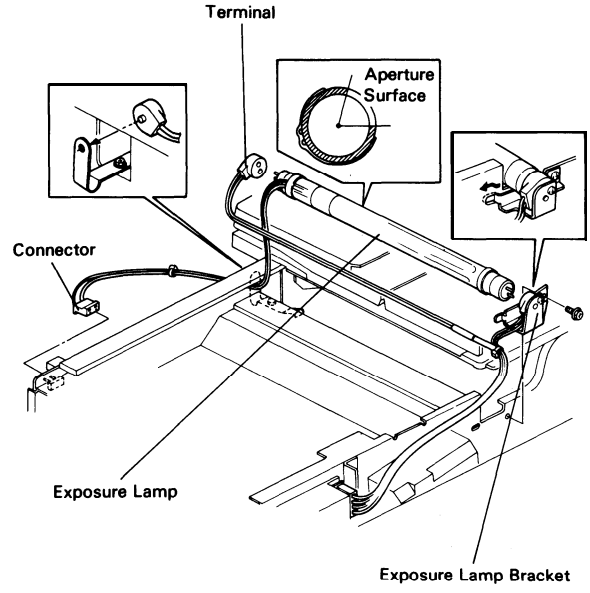
Fiber Optics Holder Lubrication (refer to FT2050) 5-12

Exposure Lamp Unit Replacement

1. **Remove the upper rear cover and move the slider to the right.**
2. **Open the front cover and remove the operation panel (2 screws and 1 connector).**
3. **Remove the upper left cover.**
4. **Remove the exposure. lamp unit together with exposure lamp bracket (1 screw).**
5. **Remove the exposure lamp unit from the exposure lamp bracket and the terminal (1 connector).**

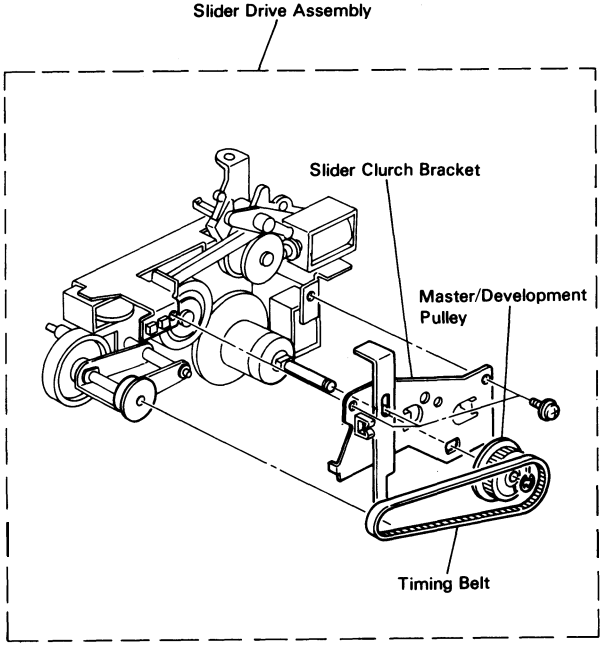
NOTE: * **Avoid touching the aperture of the exposure lamp.**
* **When re-installing the exposure lamp unit, make sure the aperture is facing up.**

CAUTION: * **When installing the exposure lamp unit, be careful not to damage the unit.**



Slider Clutch Removal

1. **Remove the slider drive assembly. (See "Slider Drive Assembly Removal" section.)**
2. **Remove the timing belt and master/development drive pulley (1 E-ring).**
3. **Remove the slider clutch bracket (3 screws).**



4. **Remove the slider reverse gear with the rubber damper and the output hub (1 washer and 1 E-ring).**

5. **Remove the reverse clutch assembly from the reverse gear shaft.**

6. **Remove the slider drive gear (1 E-ring and 1 washer).**

7. **Remove the master clutch solenoid (1 spring and 2 screws).**

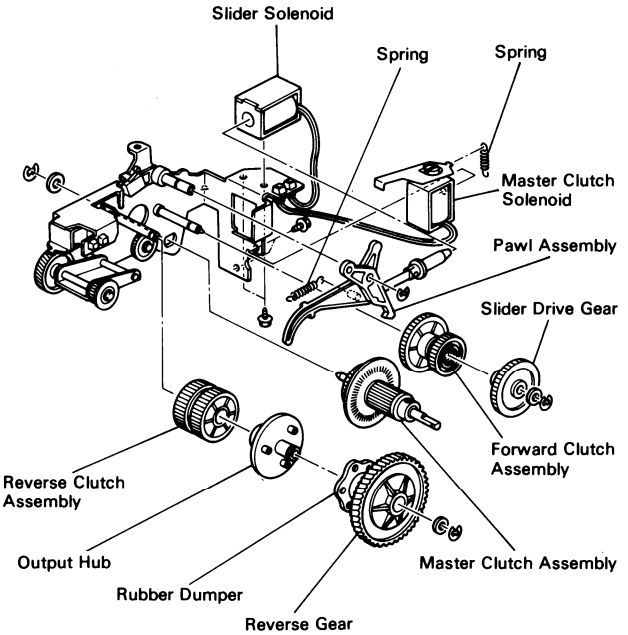
8. **Remove the slider solenoid (2 screws).**

NOTE: * **The solenoid plunger is not removed with the solenoide.**

9. **Remove the pawl assembly (1 E-ring and 1 spring).**

10. **Remove the master clutch assembly (1 E-ring and 1 bushing).**

11. **Remove the forward clutch assembly.**



14-3. Development and Quenching

Toner Metering Blade Replacement (refer to FT2050) 5-14

Quenching Lamp Replacement (refer to FT2050) 5-15

14-4. Paper Feed and Transport

Registration Clutch Lubrication 14-10

Paper Feed Sensor Replacement 14-11

Transport Belt Replacement. 14-12

Pick-up Roller Replacement (refer to FT2070) 5-24-2

Tray Feed Roller Replacement 14-13

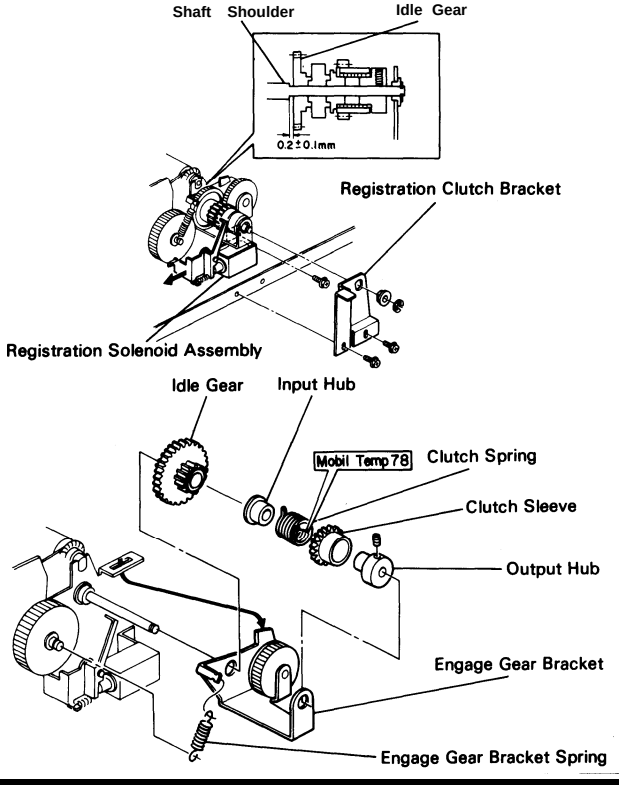
Pick-up and Tray Feed Clutches Lubrication 14-15

Paper Width Sensor Replacement (refer to FT2070) 5-24-6

Paper Length Sensor Replacement 14-16

Registration Clutch Lubrication

1. Remove the upper rear cover and the lower rear cover.
2. Remove the registration clutch bracket (2 screws, 1 E-ring and 1 bushing).
3. Remove the registration solenoid assembly (1 screw), and slide it to the left.
4. Remove the engage gear bracket spring.
5. Turn the engage gear bracket clockwise and pull it with the registration clutch assembly (1 allen set screw).
6. Separate the clutch assembly into the output hub, clutch sleeve, clutch spring, input hub and idle gear.
7. Apply Mobil Temp 78 to the clutch.
8. Re-install the clutch so that the radial end of the spring and the gear side of the clutch sleeve are facing the registration roller.
9. Position a 0.2-mm thickness gauge between the shaft shoulder and the idle gear.
10. Push the registration clutch towards the registration roller. Tighten the allen set screw.

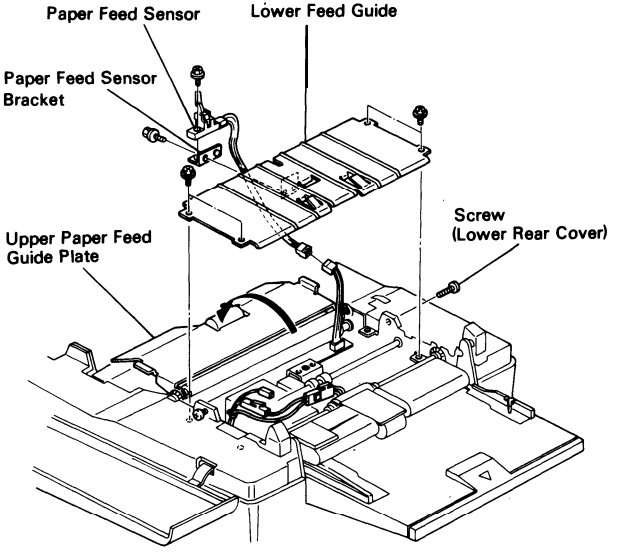


Paper Feed Sensor Replacement

1. **Open the clamshell.**
2. **Remove the development unit.**
3. **Loosen the screw securing the lower rear cover.**
4. **Swing up the upper paper feed guide plate.**
5. **Remove the lower feed guide (4 screws and 1 connector).**
6. **Remove the paper feed sensor bracket with paper feed sensor from the lower feed guide (2 screws).**
7. **Remove the paper feed sensor from the bracket (1 screw).**

NOTE: * **When closing the clamshell, be sure to return the upper paper feed guide plate to its original position. Otherwise, the master will be damaged.**

* **Do not forget to tighten the screw securing the lower rear cover.**



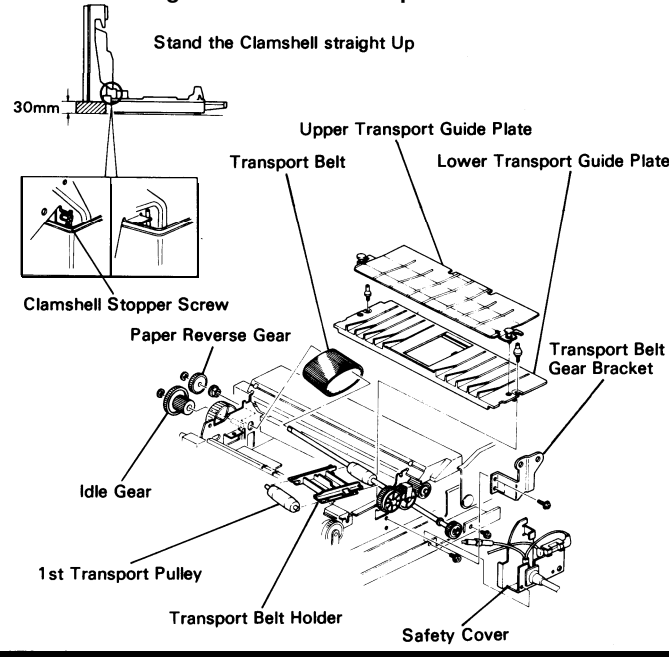
Transport Belt Replacement

1. **Remove the copy tray.**
2. **Remove the front cover (2 screws), upper rear cover (2 screws), and lower rear cover (4 screws).**
3. **Remove the safety cover (1 screw).**
4. **Remove the 2 clamshell stopper screws and stand the clamshell straight up.**

NOTE: * **When standing the clamshell straight up, place a block that has a height of approximately 30 mm (approx. 1.14") in front of exit cover as shown to the upper right.**

5. **Remove the upper transport guide plate (2 push locks).**
6. **Remove the lower transport guide plate (2 stud screws).**
7. **Remove the transport belt gear bracket (2 screws).**
8. **Remove the idle gear (1 E-ring).**
9. **Remove the paper reverse gear (1 E-ring and 1 bushing).**
10. **Remove the 1st transport pulley from the transport belt holder.**
11. **Remove the transport belt from the holder.**

NOTE: * **When reassembling, make sure that the 1st transport pulley rides in the small grooves of the transport belt holder.**

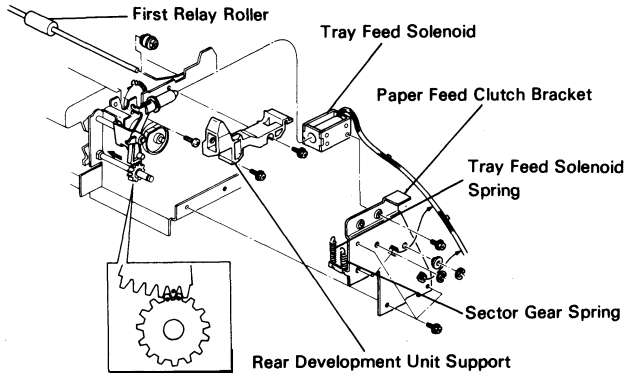


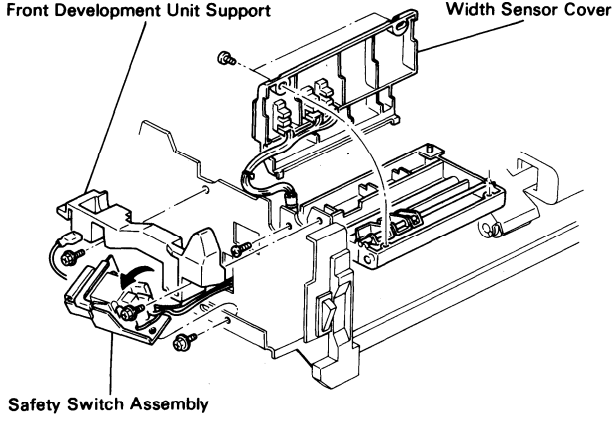
Tray Feed Roller Replacement

1. **Remove the front cover, paper tray, and the lower rear cover.**
2. **Remove the development unit.**
3. **Remove the tray feed solenoid (2 screws and 2 harness clamps).**
4. **Unhook the sector gear spring and the tray feed solenoid spring.**
5. **Remove the paper feed clutch bracket (3 screws, 3 E-rings and 3 bushings).**
6. **Remove the first relay roller (2 springs and 2 bushings).**
7. **Remove the rear development unit support (2 screws).**
8. **Remove the safety switch assembly (1 screw).**

NOTE: * **It is not necessary to disconnect the safety switch.**

9. **Remove the front development unit support (2 screws).**
10. **Take off the width sensor cover (2 screws).**





11. **Unhook the pick-up stay spring.**

12. **Remove the front and rear screws securing the front and rear feed roller housing.**

13. **Remove the housing stay and the pick-up stay cover.**

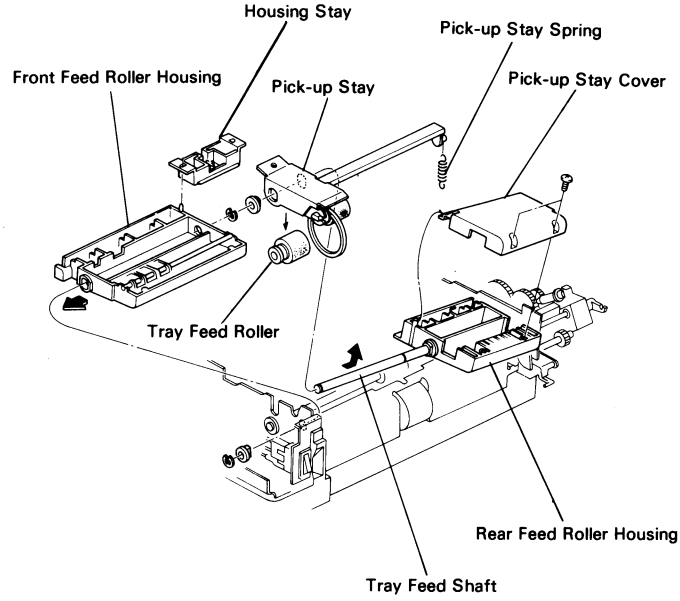
14. **Remove the E-ring and bushing from the front of the tray feed shaft. Slide the shaft to the rear and lift the front of the tray feed shaft.**

15. **Remove the front feed roller housing by sliding it to the front.**

16. **Remove the tray feed roller by sliding the pick-up stay to the front (1 E-ring and 1 bushing).**

NOTE: * **As the tray feed roller has a one-way clutch, it is important to mount the roller correctly. The pick-up roller drive belt should be towards the front.**

* **When replacing the paper feed clutch bracket, secure it with the three screws, then slide the pick-up gear slightly to the front and align the sector gear and the pick-up gear as shown in the figure. (The marked tooth on the sector gear fits in between the marked teeth of the pick-up gear.)**



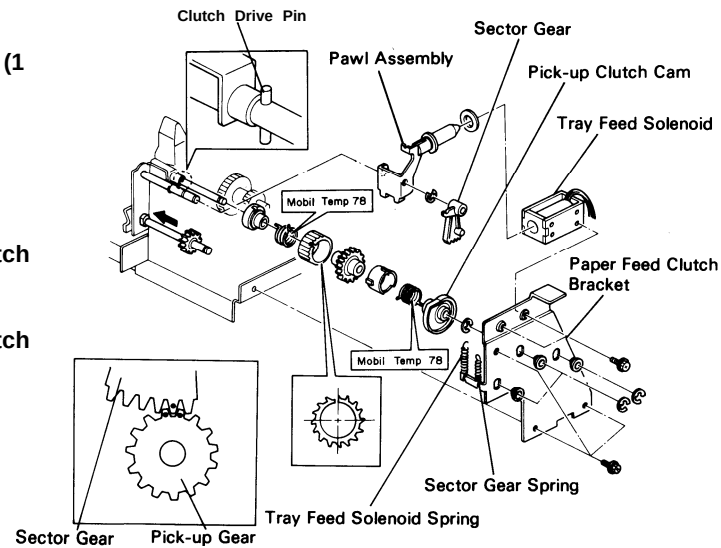
Pick-up and Tray Feed Clutches Lubrication

1. **Remove the lower rear cover.**
2. **Remove the tray feed solenoid (2 screws and 2 harness clamps).**
3. **Unhook the sector gear spring and the tray feed solenoid spring.**
4. **Remove the paper feed clutch bracket (3 screws, 3 E-rings and 3 bushings).**
5. **Remove the sector gear and pawl assembly (1 E-ring).**
6. **Remove the pick-up clutch cam (1 E-ring).**
7. **Remove the clutch assembly.**
8. **Disassemble and lubricate the pick-up clutch and tray feed clutch.**

CAUTION: * **Be careful not to loose the clutch drive pin.**

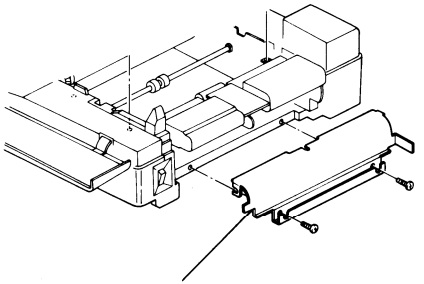
NOTE: * **When reinstalling the spring clutches, be sure to insert the projections of the clutch springs into the notches.**

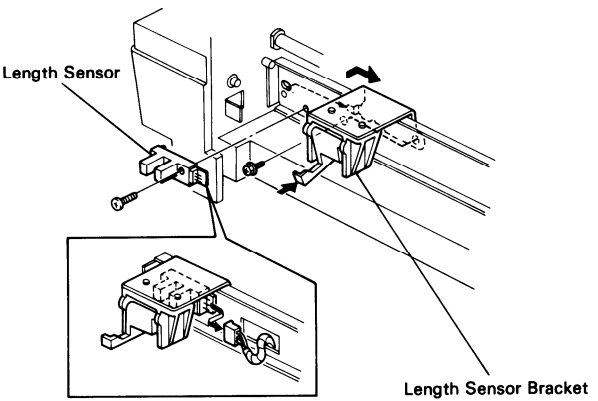
* **When replacing the paper feed clutch bracket, secure it with the three screws, then slide the pick-up gear slightly to the front and align the sector gear and the pick-up gear. (The marked tooth on the sector gear fits between the marked teeth of the pick-up gear.)**



Paper Length Sensor Replacement

1. **Open the clamshell.**
2. **Remove the development unit.**
3. **Remove the paper tray.**
4. **Remove the length sensor cover (2 screws).**
5. **Remove the screw securing the length sensor bracket and slide the bracket to the right.**
6. **Remove the length sensor (1 screw and 1 connector).**





14-5. Image Fusing

Hot Roller Replacement (refer to FT2050) 5-26

Pressure Roller Replacement. 14-18

Thermistor Replacement 14-19

Thermofuse Replacement 14-20

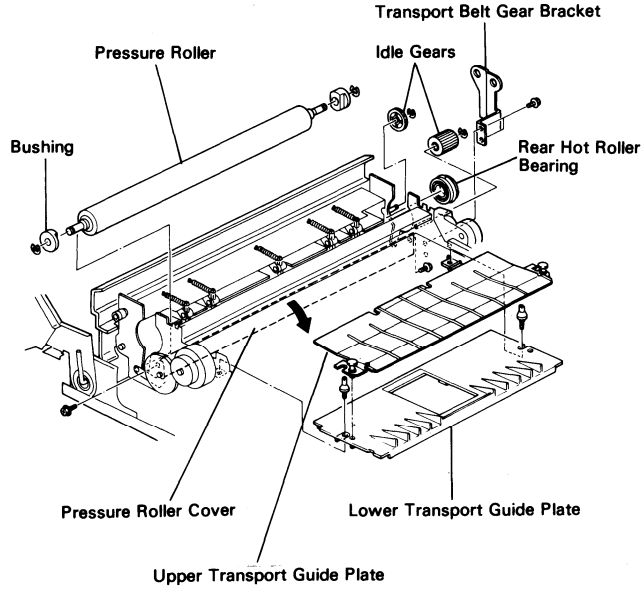
Hot Roller Strippers Replacement 14-21

Exit Sensor Replacement 14-22

Pressure Roller Replacement

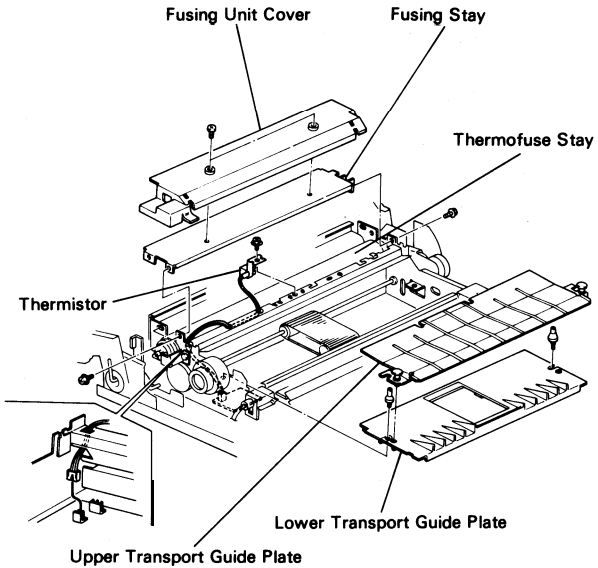
1. **Remove the hot roller. (See "Hot Roller Replacement" section.)**
2. **Remove the transport belt gear bracket (2 screws).**
3. **Remove the 2 idle gears as shown to the right (1 E-ring each).**
4. **Remove the rear hot roller bearing.**
5. **Remove the upper transport guide plate (2 push-locks) and lower transport guide plate (2 stud screws).**
6. **Swing the pressure roller cover away from the pressure roller (2 screws).**
7. **Remove the pressure roller.**
8. **Remove the front and rear bushings (1 E-ring each).**

NOTE: * **Be careful not to damage the pressure roller.**



Thermistor Replacement

1. **Open the clamshell and stand it straight up. (See "Transport Belt Replacement" section.)**
2. **Remove the fusing unit cover (2 screws).**
3. **Remove the fusing stay (4 screws). (See "Hot Roller Replacement" section.)**
4. **Remove the upper transport guide plate (2 push-locks) and lower transport guide plate (2 stud screws).**
5. **Remove the screw securing the front end of the thermofuse stay.**
6. **Lift the thermofuse stay and remove the thermistor harness from the stay.**
7. **Remove the thermistor (1 screw and 1 connector).**



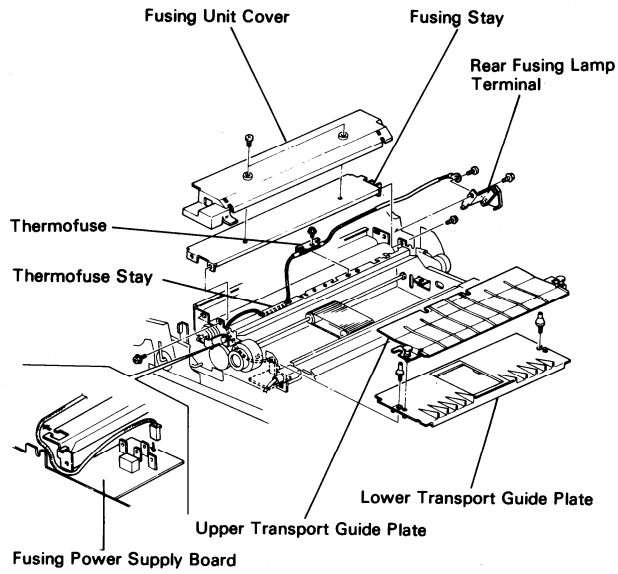
Thermofuse Replacement

1. **Open the clamshell and stand it straight up. (See "Transport Belt Replacement" section.)**
2. **Remove the fusing unit cover (2 screws). (See "Hot Roller Replacement" section.)**
3. **Remove the fusing stay (4 screws).**
4. **Remove the upper transport guide plate (2 push-locks) and the lower transport guide plate (2 stud screws).**
5. **Remove the rear fusing lamp terminal (1 screw).**

CAUTION: * **When removing the rear fusing lamp terminal, be careful not to damage the fusing lamp.**

6. **Remove the thermofuse harness from the rear fusing lamp terminal (1 screw).**
7. **Disconnect the thermofuse connector from the fusing power supply board.**
8. **Remove the screw securing the front end of the thermofuse stay.**
9. **Lift the thermofuse stay and remove the thermofuse harness from the stay.**
10. **Remove the thermofuse.**

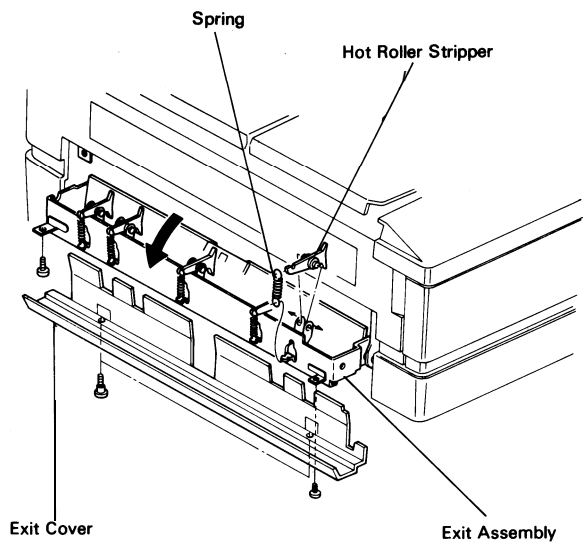
NOTE: * **When installing the thermofuse, be sure to route the wire properly as shown in the figure.**



Hot Roller Strippers Replacement

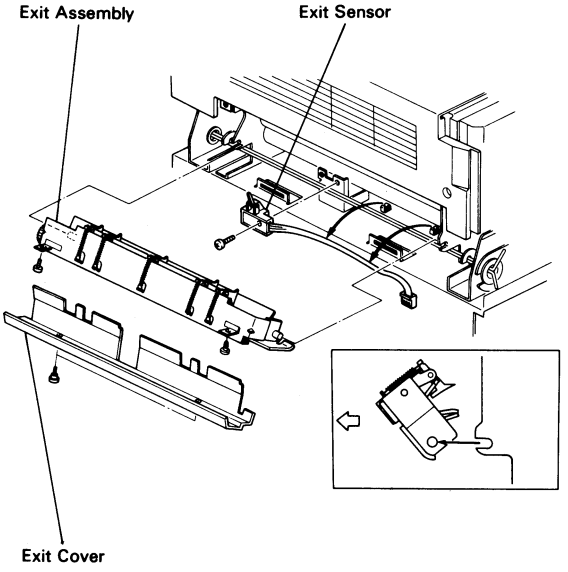
1. **Remove the exit cover (2 screws).**
2. **Open the exit assembly (2 screws).**
3. **Remove the hot roller strippers together with springs.**

NOTE: * **It is advisable to replace the hot roller strippers as a set.**



Exit Sensor Replacement

1. **Remove the exit cover (2 screws).**
2. **Open the exit assembly and remove the exit assembly (2 screws).**
3. **Remove the upper transport guide plate (2 push-locks) and lower transport guide plate (2 stud screws). (See "Transport Belt Replacement" section.)**
4. **Remove the exit sensor (1 screw, 1 connector and 2 clamps).**



14-6. Corona

Charge Corona Wire Replacement (refer to FT2050) 5-34

Transfer Corona Wire Replacement (refer to FT2050) 5-35

14-7. Copy Image

Auto ID Sensor Adjustment 14-26

Leading Edge Registration Adjustment 14-27

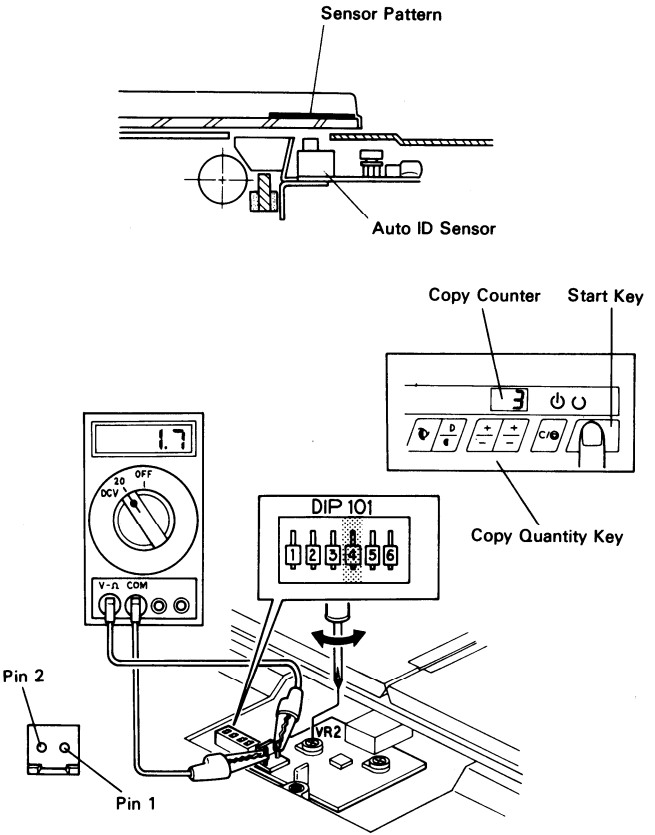
Leading Edge Erase adjustment 14-28

Auto ID Sensor Adjustment

1. **Turn off the main switch.**
2. **Remove the master unit. (See "Erase Lamp Replacement" section.)**
3. **Move the slider to the home position.**

NOTE: * **When the slider is at the home position, the sensor pattern is just above the auto ID sensor.**

4. **Remove the exposure sensor cover (1 screw).**
5. **Turn on DIP SW 4 (test mode).**
6. **Set meter to 20 Vdc setting.**
7. **Connect meter leads and V-ohm to the pins and 2 of the connector on the exposure sensor board.**
8. **Turn on the main switch.**
9. **Press the Copy Quantity key until 3 is displayed in the copy counter.**
10. **Press the Start key to start the test mode.**
11. **Adjust VR2 so that the voltage is 1.7 ± 0.1 V.**



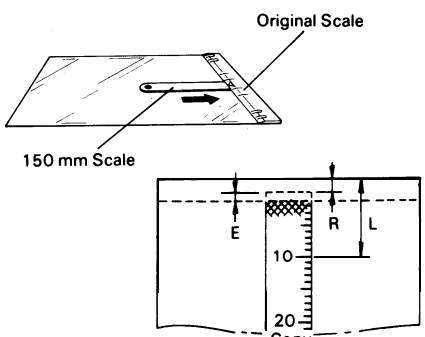
Leading Edge Registration Adjustment

1. **Lay a scale on the exposure glass as shown in the figure.**

2. **Make a few copies and check that the leading edge registration is within specifications.**

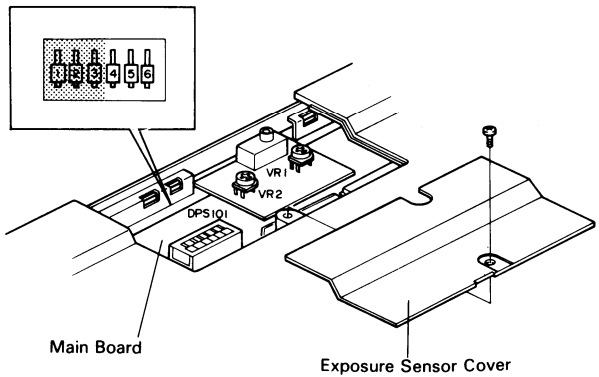
   Leading Edge Registration Specifications.
   0 ± 2.0 mm (0 ± 0.08")
   [Blank Leading Edge 2.1 ± 3.0 mm (0.083 ± 0.12")]

3. **If it is out of the specifications adjust it using DIP SW 1, 2, and 3 on the main board.**



E : Erase
R : Registration

NOTE: * **When adjusting the leading edge registration, move the slider to the home position and remove the exposure sensor cover (1 screw).**



– Leading Edge Registration –

1 : SW ON 0 : SW OFF

No.1	No.2	NO.3	Registration
0	0	0	Decrease (–)
1	0	0	
0	1	0	
1	1	0	Variation per step: Approx. 1.3mm (0.051")
0	0	1	
1	0	1	
0	1	1	
1	1	1	Increase (+)

Leading Edge Erase Adjustment

1. **Lay a scale on the exposure glass, aligning it with the original scale as shown to the right.**

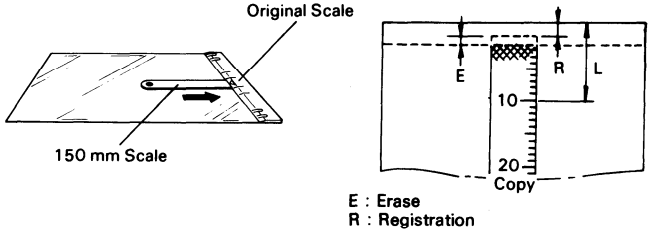
2. **Make a few copies and check that the leading edge erase is within specification.**

   Leading Edge Erase Specification
   2.1 ± 1mm (0.083 ±0.04")

NOTE: * Leading edge erase is the distance "E" in the figure (the length of scale that has been erased).

3. **If the leading edge erase is out of specification, adjust it using JP103 on the main board and JP1 on the dc power supply board as shown to the right table.**

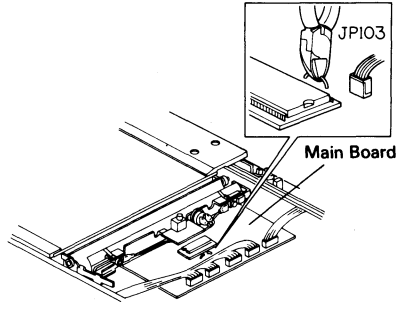
NOTE: 1. When connecting or cutting JP103 on the main board:
(1) Remove the upper right cover.
(2) Connect or cut JP103.



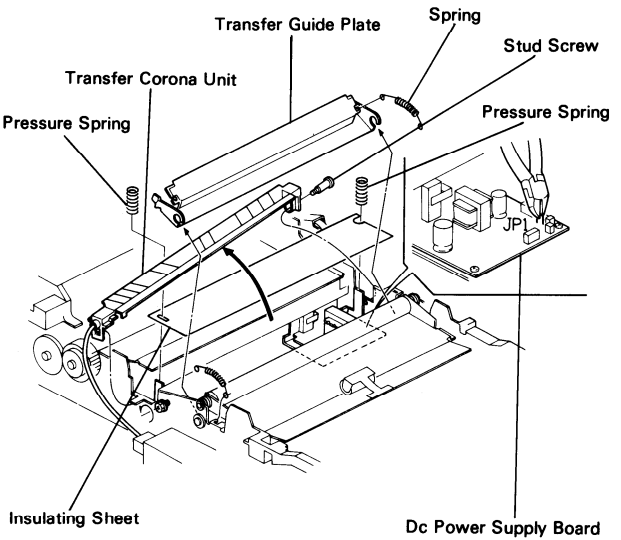
1: Connect 0: Cut

JP103	JP1	Erase
1	1	Increase (+)
1 (0	0 1)	Variation per step: Approx 2.6mm (0.1")
0	0	Decrease (–)

JP103: On the main board JP1 : On the dc power supply board



2. When connecting or cutting JP1 on the dc power supply board.
   (1) Open the clamshell.
   (2) Stand the clamshell straight up. (See "Transport Belt Replacement" section.)
   (3) Loosen the screw securing the transfer guide plate.
   (4) Remove the transfer guide plate (2 springs).
   (5) Remove the transfer corona unit (1 stud screw).
   (6) Remove the front and rear pressure springs and insulating sheet.
   (7) Connect or cut JP1 on the dc power supply board.



14-8. Others

Master Clutch Lubrication (refer to FT2050) 5-42

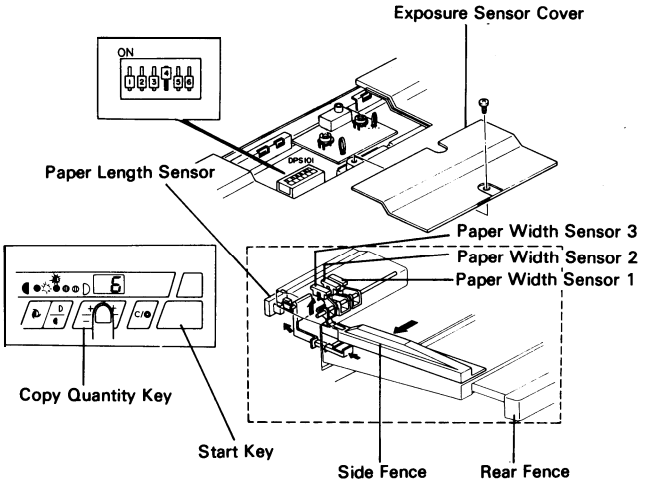
Slider Drive Assembly Removal (refer to FT2050) 5-43

50Hz/60Hz Conversion (refertoFT2050) 5-44

Paper Size Sensor Check 14-32

Paper Size Sensor Check

1. **Turn off the main switch.**
2. **Remove the exposure sensor cover (1 screw).**
3. **Turn on DIP SW 4 (test mode).**
4. **Turn on the main switch.**
5. **Repeatedly press the Copy Quantity key until 6 is displayed in the copy counter.**
6. **Press the Start key to start the test mode.**
7. **Move the side or rear fences on the paper tray and check the paper size sensors according to the right table.**



Sensor	ON	OFF
Paper length sensor	Auto ID Indicator Light ON	Auto ID Indicator Light OFF
Paper width sensor 1	Image Density Indicator Level 3 : Light ON	Image Density Indicator Level 3 : Light OFF
Paper width sensor 2	Image Density Indicator Level 2 : Light ON	Image Density Indicator Level 2 : Light OFF
Paper width sensor 3	Image Density Indicator Level 1 : Light ON	Image Density Indicator Level 1 : Light OFF

SECTION 15

TROUBLESHOOTING

15-1. Copy Quality Problems

No.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
1.	UNEVEN IMAGE DENSITY	(1) Fiber optics are dirty. (2) Charge corona wire is dirty. (3) Charge corona wire is mounted incorrectly. (4) Quenching lamp is dirty. (5) Reflector is dirty. (6) Exposure lamp is dirty.	(1) Clean them with the cleaner. (2) Clean it with the cleaner. (3) Check the wire is in the V-slot. (4) Clean it with a soft cloth. (5) Clean it with a soft cloth. (6) Clean it with a soft cloth.
2.	WHITE LINES OR STREAKS	(1) Toner blocking on the toner metering blade. (2) Insufficient toner in the development unit. (3) Grid plate is dirty. (4) Charge corona wire is dirty.	(1) Clean the blade with the toner agitator. (2) Replenish one toner cartridge and agitate the metering blade with the toner agitator. (3) Clean it with a blower brush. (4) Clean it with the cleaner.
3.	FUZZY COPY	(1) Original is not flat on the exposure glass. (2) Fiber optics are dirty. (3) Exposure glass is dirty. (4) Fiber optics are not installed securely.	(1) Instruct operator to correct original curl. (2) Clean them with the cleaner. (3) Clean it with a soft cloth. (4) Install the fiber optics in the holder securely.

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
4.	DIRTY BACKGROUND	(1) Light fatigue of the master unit.	(1) Avoid exposing the master unit to light. (Do not leave the machine with the top unit opened for a long time)
		(2) Exposure glass is dirty.	(2) Clean it with a soft cloth.
		(3) Platen cover sheet is dirty.	(3) Clean it with a damp cloth.
		(4) Bias circuit failure.	(4) Check the circuit and replace the defective part.
		(5) Quenching lamp failure.	(5) Check the circuit and replace the defective part.
5.	DIRTY BACKSIDE OR LEADING EDGE	(1) Lower feed guide is dirty.	(1) Clean it with a damp cloth.
		(2) Transfer corona unit is dirty.	(2) Same as (1)
		(3) Transport guide plate is dirty.	(3) Same as (1)
		(4) Transport belt is dirty.	(4) Same as (1)
		(5) Registration roller is dirty.	(5) Clean it with a soft cloth.
6.	BLANK AREAS	(1) Paper is damp.	(1) Change the paper on the paper tray. (Instruct operator how to store paper when it is not to be used for a long time.)
		(2) Paper is curled.	(2) Correct the paper curl. (Instruct operator how to correct the curl.)

NO.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
7.	INSUFFICIENT IMAGE DENSITY	(1) Transfer corona wire is dirty. (2) Transfer corona wire is broken. (3) Transfer power pack failure. (4) Master unit has exceeded service life. (5) Paper is damp. (6) Development roller does not rotate.	(1) Clean it with cotton swabs. (2) Replace the transfer corona wire. (3) Check the circuit and replace the defective part. (4) Replace the master unit. (5) Change the paper on the paper tray. (6) Check the drive mechanism.
8.	WHITE COPY	(1) Charge corona wire is broken. (2) Charge power pack failure.	(1) Replace the charge corona wire. (2) Check the circuit and replace the defective part with a new one.
9.	FAINT COPY AT LEADING OR TRAILING EDGE	(1) Paper is curled. (2) Paper is damp.	(1) Correct the paper curl before making copies. (2) Change the paper on the paper tray. O Instruct operator how to store paper when it is not to be used for a long time. O Thick and/or thin paper sometimes make faint copies due to paper quality. O Instruct the operator to use recommended paper.

No.	PHENOMENON	CAUSES	REPAIR (TREATMENTS)
10.	WRINKLED COPY	(1) Paper is curled. (2) Paper is damp.	(1) Correct the paper curl. (2) Change the paper on the paper tray.
11.	BLACK LINES	(1) Thermistor is dirty. (2) Hot roller strippers are dirty. (3) Deformed toner metering blade.	(1) Clean it with a damp cloth. (2) Clean them with a damp cloth. (3) Replace the blade with new one.
12.	JITTER	(1) Insufficient friction of the slider clutch.	(1) Replace the clutch. (Forward or Reverse)
13.	MISFEED	(1) Paper incorrectly loaded. (2) Paper stiffness. (3) Tray feed clutch failure. (4) Paper feed and registration solenoid failure. (5) Paper feed drive failure.	(1) Load the paper on the paper tray correctly. (2) Use recommended paper. (3) Apply "Mobil Temp 78" to the clutch spring. (4) Check or replace the solenoid. (5) Check the paper feed drive mechanism.
14.	NOISE	(1) Lack of lubricant.	(1) Apply "Grease 501" to the gears. (2) Apply "Grease 501" to the fiber optics holders.

15-2. Defective Sensor/Switch Table

Sensor/switch	Opened	Shorted
Safety Switch	Copier can not be powered.	Safety function does not work.
Master Sensor	Self-diagnostic code "E7"	Self-diagnostic code "E7"
Home Position Switch	Self-diagnostic code "E2"	Self-diagnostic code "E2"
Pulse Generator	Self-diagnostic code "E6"	Self-diagnostic code "E6"
Exposure Sensor	Self-diagnostic code "E1"	Self-diagnostic code "El"
Toner End Sensor	Toner End indicator does not turn on at toner end.	Toner End indicator turns on with sufficient toner present.
Toner Overflow Sensor	Replace Toner Collection Unit indicator is displayed at non-overflow.	Replace Toner Collection Unit indicator does not turn on at overflow.
Auto ID Sensor	Dark copy image	Light copy image
Relay Feed Sensor	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)
Paper Feed Sensor	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)

Sensor/switch	Opened	Shorted
Exit Sensor	Misfeed will occur.	Check Paper Path indicator is displayed at power on. (Initial Jam Check)
Paper Width Sensors	CPU may detect wrong paper size.	CPU may detect wrong paper size.
Paper Length Sensor	CPU may detect wrong paper size.	CPU may detect wrong paper size.

15-3. Self Diagnostic Code Troubleshooting

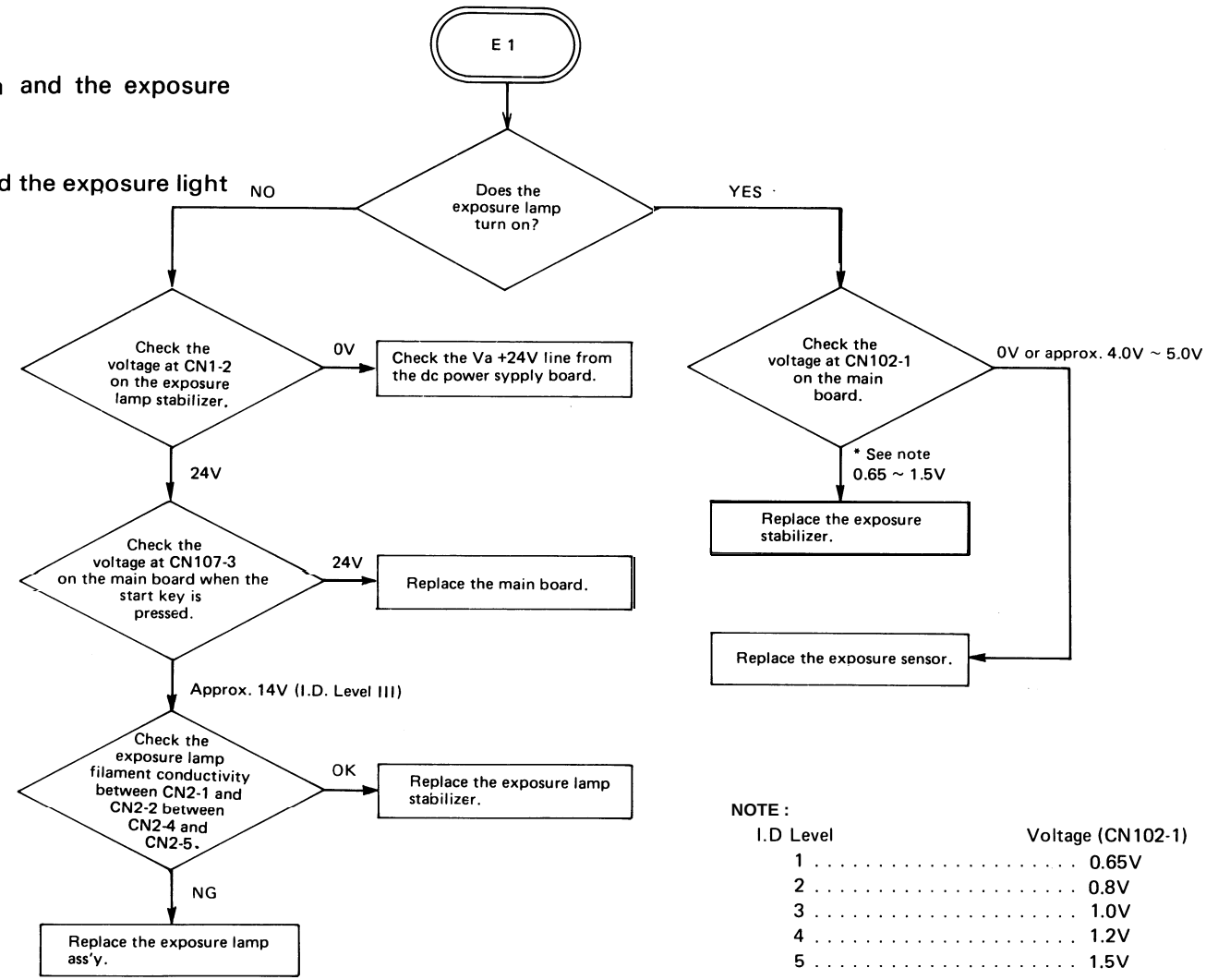
E 1 Exposure

Definition

1. Lights if the duty (T_1/T) is maximum and the exposure light intensity is too weak.
2. Lights if the duty (T_1/T) is minimum and the exposure light intensity is too strong.

Possible causes

1. **Exposure sensor open or shorted**
2. **Exposure lamp stabilizer defective**
3. **Exposure lamp broken**
4. **Main board defective**


E 1
Does the exposure lamp turn on?
NO
YES
Check the voltage at CN1-2 on the exposure lamp stabilizer.
0V
Check the Va +24V line from the dc power sypply board.
24V
Check the voltage at CN107-3 on the main board when the start key is pressed.
24V
Replace the main board.
Approx. 14V (I.D. Level III)
Check the exposure lamp filament conductivity between CN2-1 and CN2-2 between CN2-4 and CN2-5.
OK
Replace the exposure lamp stabilizer.
NG
Replace the exposure lamp ass'y.
Check the voltage at CN102-1 on the main board.
0V or approx. 4.0V ~ 5.0V
* See note
0.65 ~ 1.5V
Replace the exposure stabilizer.
Replace the exposure sensor.

NOTE :

I.D Level	Voltage (CN102-1)
1	0.65V
2	0.8V
3	1.0V
4	1.2V
5	1.5V

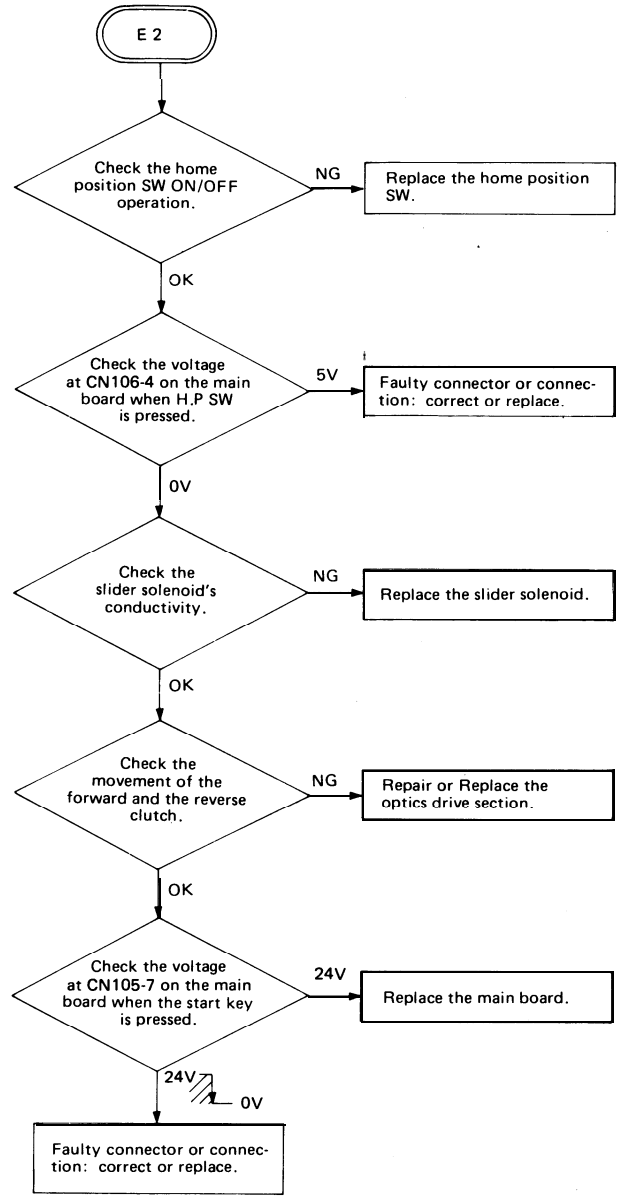
E 2 Slider

Definition

1. **Lights if the home position SW does not turn on within 4 s after the start key is pressed.**
2. **Lights if the home position SW is off, when the slider starts forward drive.**
3. **Lights if home position SW does not turn off within 1 s after the slider starts.**

Possible causes

1. **Home position switch broken**
2. **Forward and/or reverse clutch malfunction**
3. **Slider solenoid defective**
4. **Main board defective**


E 2
Check the home position SW ON/OFF operation.
NG
Replace the home position SW.
OK
Check the voltage at CN106-4 on the main board when H.P SW is pressed.
5V
Faulty connector or connection: correct or replace.
0V
Check the slider solenoid's conductivity.
NG
Replace the slider solenoid.
OK
Check the movement of the forward and the reverse clutch.
NG
Repair or Replace the optics drive section.
OK
Check the voltage at CN105-7 on the main board when the start key is pressed.
24V
Replace the main board.
24V
0V
Faulty connector or connection: correct or replace.

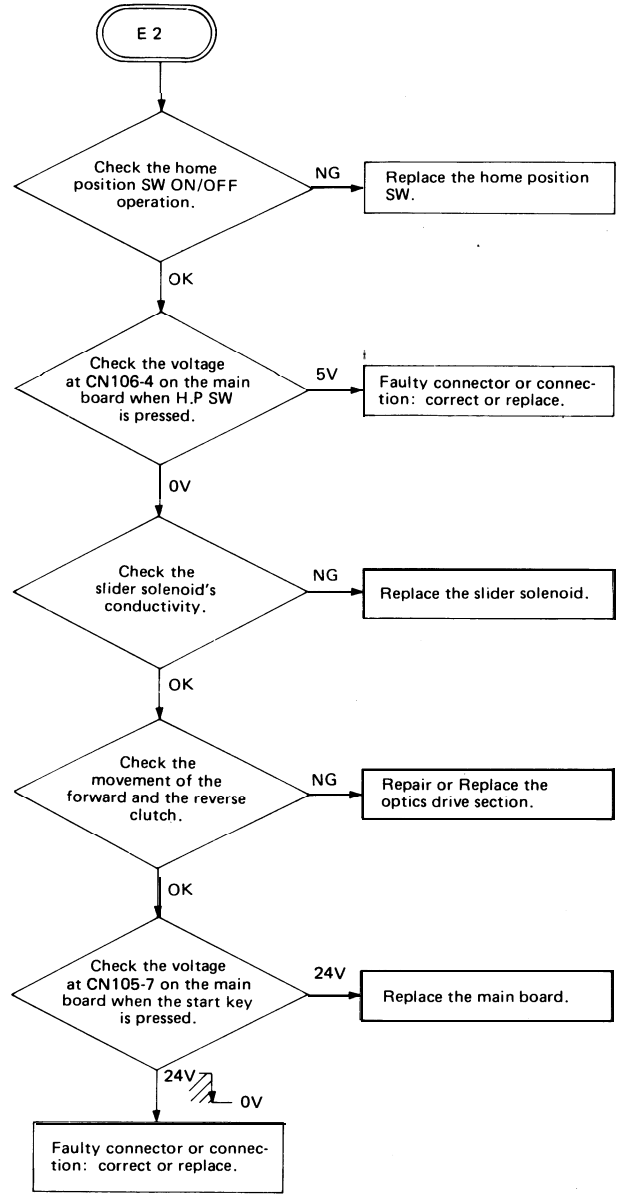
E 2 Slider

Definition

1. **Lights if the home position SW does not turn on within 4 s after the start key is pressed.**
2. **Lights if the home position SW is off, when the slider starts forward drive.**
3. **Lights if home position SW does not turn off within 1 s after the slider starts.**

Possible causes

1. **Home position switch broken**
2. **Forward and/or reverse clutch malfunction**
3. **Slider solenoid defective**
4. **Main board defective**


E 2
Check the home position SW ON/OFF operation.
NG
Replace the home position SW.
OK
Check the voltage at CN106-4 on the main board when H.P SW is pressed.
5V
Faulty connector or connection: correct or replace.
0V
Check the slider solenoid's conductivity.
NG
Replace the slider solenoid.
OK
Check the movement of the forward and the reverse clutch.
NG
Repair or Replace the optics drive section.
OK
Check the voltage at CN105-7 on the main board when the start key is pressed.
24V
Replace the main board.
24V
0V
Faulty connector or connection: correct or replace.

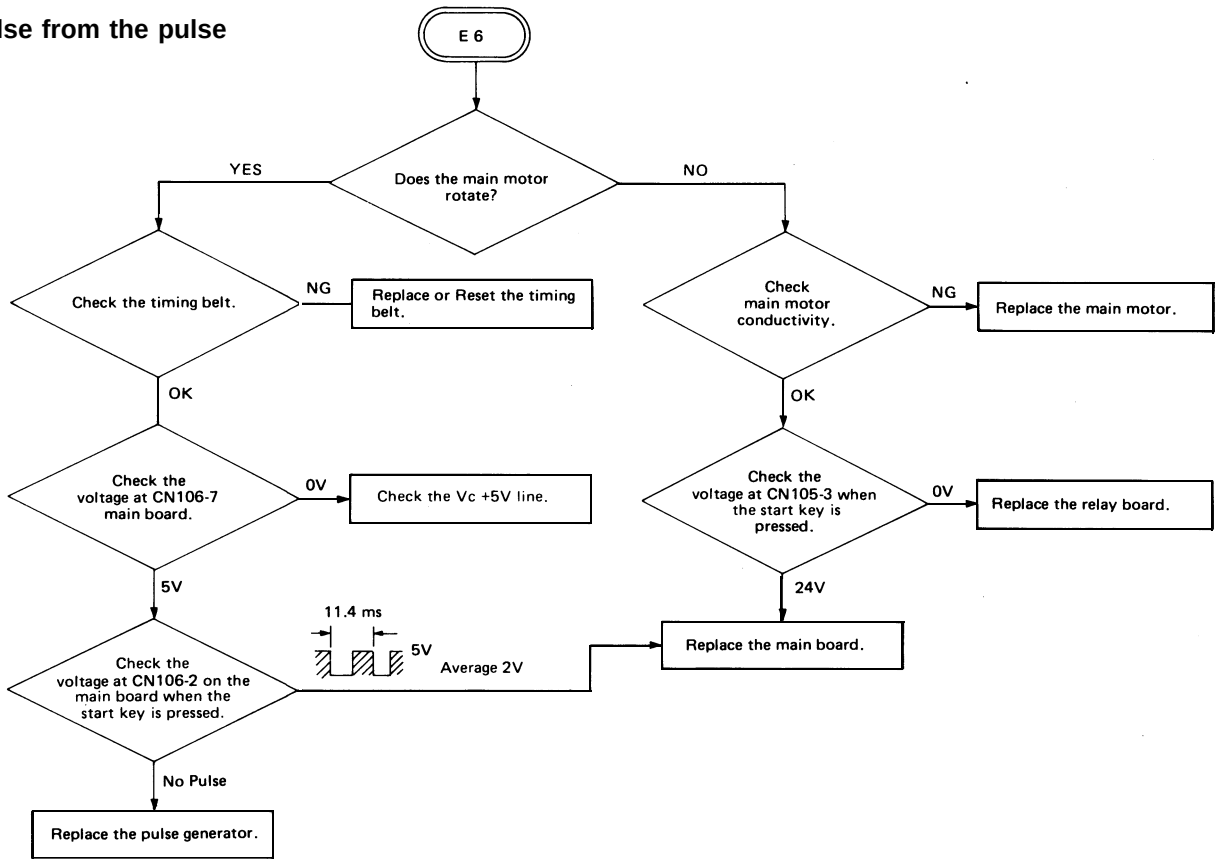
E 6 Functional Drive

Definition

1. **Lights if the CPU does not received a pulse from the pulse generator for 1.6 s during a copy cycle.**

Possible causes

1. **Main motor failure**
2. **Relay board defective**
3. **Timing belt broken or out of place**
4. **Main board defective**
5. **Pulse generator defective**



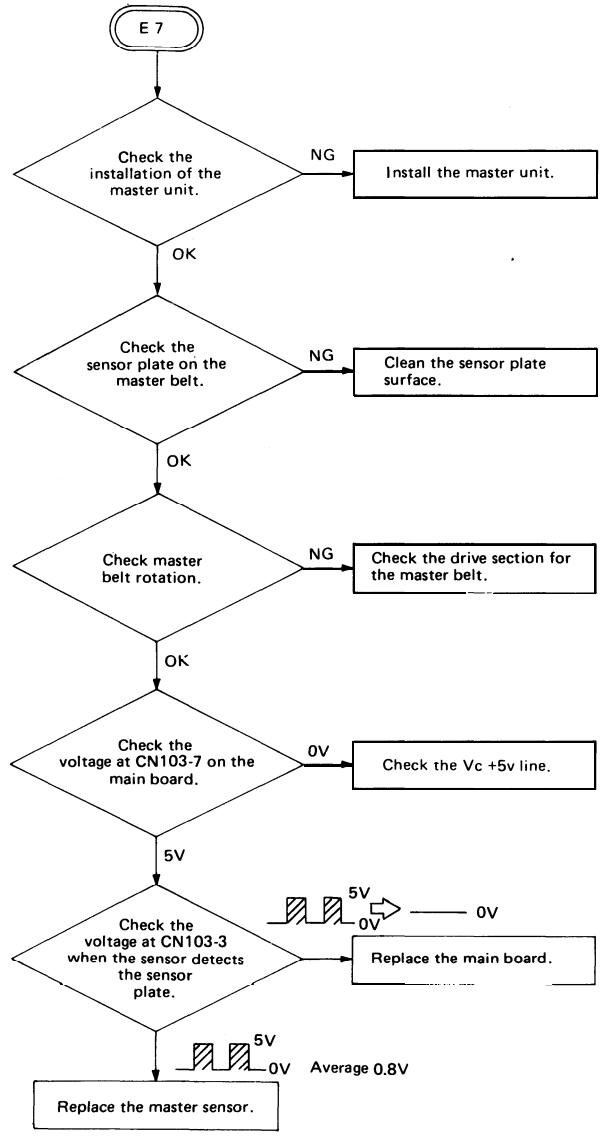
E 7 Master Unit

Definition

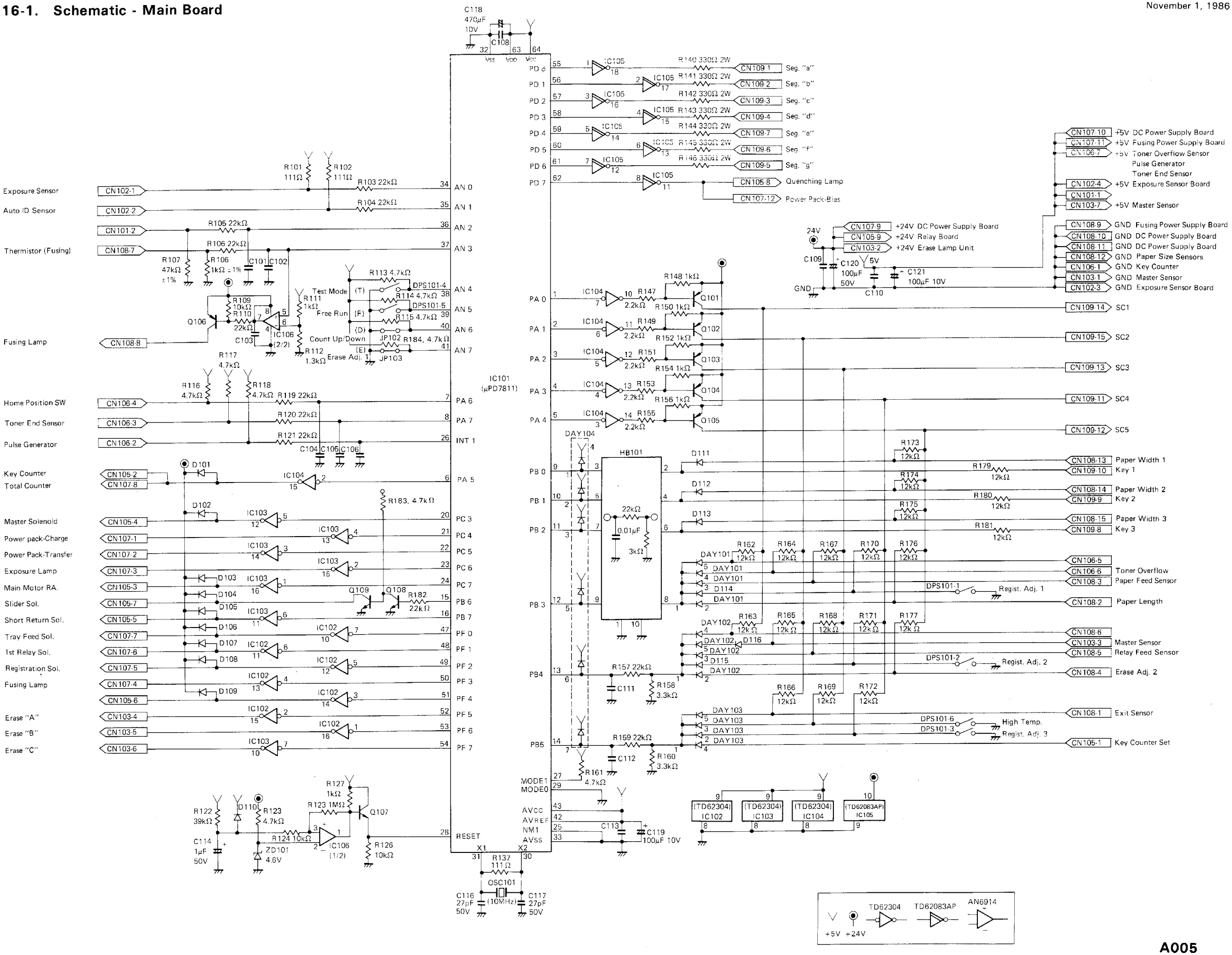
1. **Lights if the CPU does not detect the sensor plate within 6 s after belt rotation.**

Possible causes

1. No **master unit installed**
2. **Main board defective**
3. **Master sensor defective**
4. **Master unit defective**



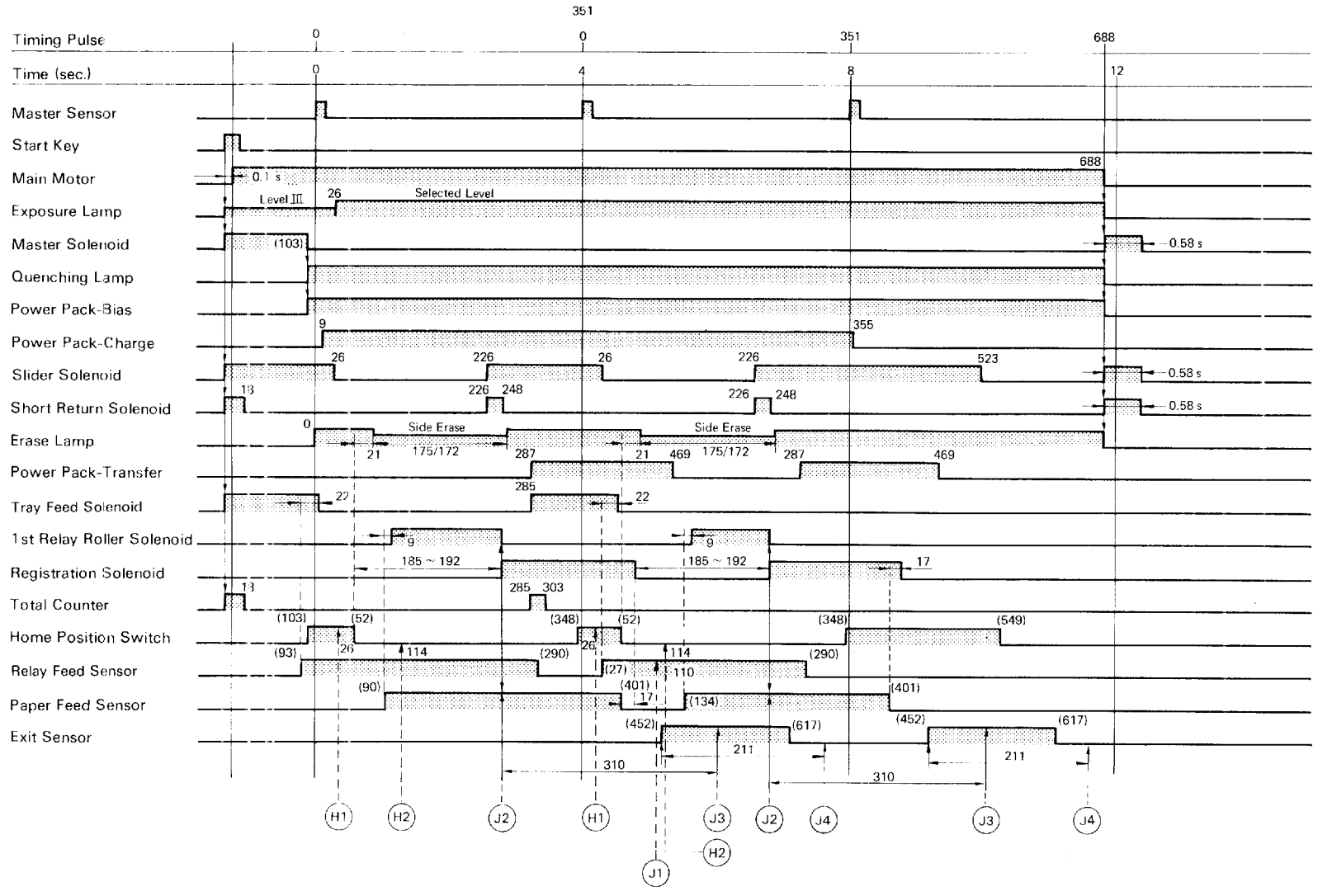
16-1. Schematic - Main Board



A005

[11" x 8-1/2"/A4 Sideways]

Process Speed = 115 mm/sec.
1 Pulse = 1.3 mm, 11.4 ms



RICOH

RICOH FT2050

PARTS CATALOG

1st edition Oct. 1985

RICOH COMPANY LTD.

PARTS CATALOG

INTRODUCTION

This chapter instructs you the numbers and names of the parts on this machine.

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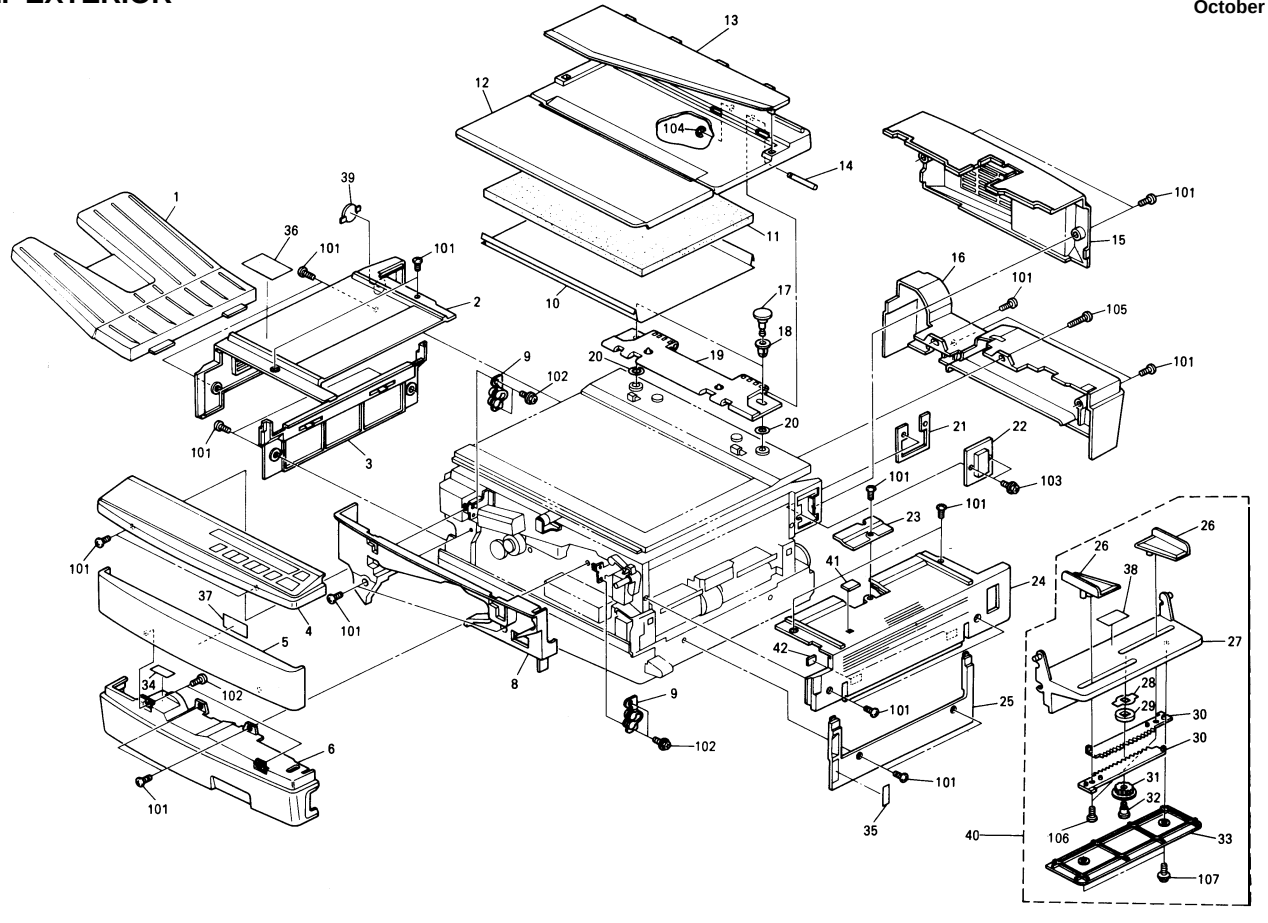
1. EXTERIOR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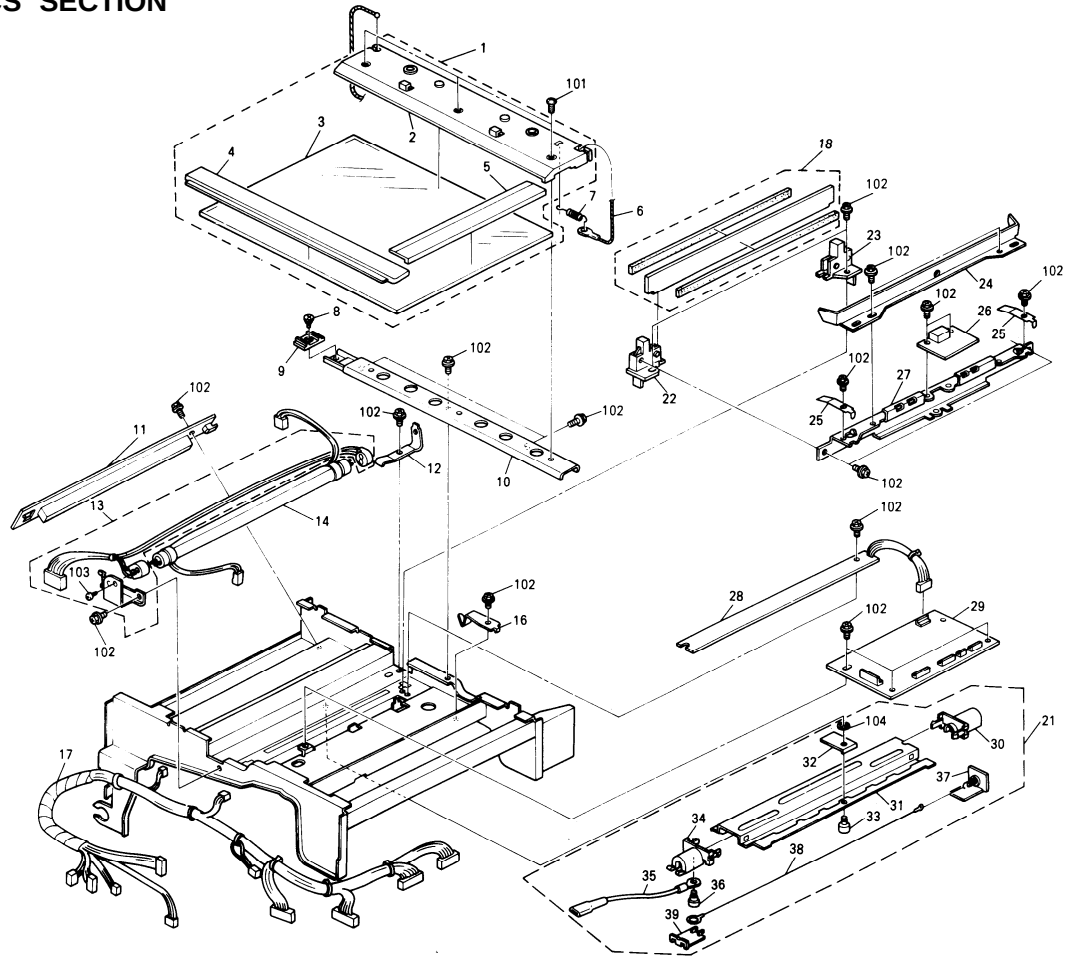
1. EXTERIOR

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 4249	Copy Tray	1
2	5216 1317	Upper Left Cover - RIC (USA)	1
	5216 1260	Upper Left Cover - RIC (220V, ROC), NSA	1
3	5216 1330	Lower Left Cover - RIC (USA), NSA SA	1
	5216 1286	Lower Left Cover - RIC (220V, ROC), NSA EU	1
4	5216 5512	Operation Panel Ass'y - RIC (USA)	1
	5216 5612	Operation Panel Ass'y - RIC (220V, ROC)	1
5	5216 1311	Upper Front Cover - RIC (USA)	1
	5216 1251	Upper Front Cover - RIC (220V, ROC), NSA	1
6	5216 1323	Lower Front Cover - RIC (USA)	1
	5216 1275	Lower Front Cover - RIC (220V, ROC)	1
8	5216 1271	Inner Cover	1
9	5409 1238	Rotary Catch	2
10	5216 1367	Platen Cover Sheet	1
11	5216 1366	Platen Cover Pad	1
12	5216 1361	Platen Cover - RIC	1
13	5216 1365	Original Holder - RIC	1
14	5216 1374	Hinge Shaft - Platen Cover	2
15	5216 1313	Upper Rear Cover - RIC (USA)	1
	5216 1255	Upper Rear Cover - RIC (220V, ROC), NSA	1
16	5216 1327	Lower Rear Cover - RIC (USA)	1
	5216 1281	Lower Rear Cover - 220V	1
17	5216 1373	Ratch - Plunger	2
18	5216 1372	Ratch - Grommet	2
19	5216 1371	Platen Cover Hinge - RIC	1
20	5203 1359	Platen Cover Washer	2
21	5420 1515	Plate - Key Counter	1
22	5216 1303	Key Counter Cover - RIC, NSA	1
23	5216 1269	Exposure Sensor Cover - RIC, NSA	1
24	5216 1320	Upper Right Cover - RIC (USA)	1
	5216 1265	Upper Right Cover - RIC (220V, ROC), NSA	1
25	5216 1291	Lower Right Cover - RIC, NSA	1
26	5216 2754	Side Guide - Manual Feed - RIC, NSA	2
27	5216 2872	Manual Feed Guide - RIC (USA)	1
	52162 874	Manual Feed Guide - RIC (ROC)	1

Index No.	Part NO.	Description	Q'ty Per Assembly
	5216 2873	Manual Feed Guide - 220V	1
28	5203 2678	Paper Tray Spring	1
29	5203 2677	Friction Disc	1
30	5216 2753	Manual Feed Guide Rack	2
31	5203 2675	Paper Tray Pinion	1
32	5203 2679	Pinion Tightening Screw - M4 x 5	1
33	5216 2752	Manual Feed Guide Cover - RIC, NSA	1
34	5216 1279	Misfeed Removal Decal	1
35	5216 1293	Lock Release Decal - RIC (USA)	1
	5216 1295	Lock Release Decal - RIC (220V, ROC), NSA	1
36	5216 4867	Instruction Decal 1 - RIC (USA)	1
	5216 4873	Instruction Decal 1 - RIC (220V, ROC), NSA	1
	5216 4874	French Instruction Decal 1	1
	5216 4875	German Instruction Decal 1 - RIC(220V), NSA EU	1
	5216 4876	Italian Instruction Decal 1 - RIC(220V), NSA EU	1
	5216 4877	Spanish Instruction Decal 1 - RIC(220V), NSA EU	1
37	5216 4880	Instruction Decal 2	1
38	5216 2755	Mylar - 19 x 48MM	1
39	5216 1262	Sortor Harness Cap	1
40	5216 2875	Manual Feed Guide Ass'y - RIC (USA)	1
	5216 2877	Manual Feed Guide Ass'y - 220V	1
	5216 2876	Manual Feed Guide Ass'y - RIC (ROC)	1
41	5216 1267	Toner Color Panel	1
42	5216 1268	Lock Pawl Cushion	1
*	5216 8706	Operating Instructions - English	1
*	5216 8708	Operating Instructions - German	1
*	5216 8709	Operating Instructions - French	1
*	5216 8710	Operating Instructions - Italian	1
*	5216 8711	Operating Instructions - Spanish	1
*	5216 8721	Installation Procedure - English	1
*	5216 8722	Installation Procedure - Multi-language	1
*	5216 8723	Installation Procedure - USA	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
101	0353 0060F	Philips Pan Head Bind Screw - M3 x 6	24
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	6
103	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	2
104	0720 0025E	Retaining Ring - M2.5	2
105	0313 0100E	Philips Pan Head Screw - M3 x 10	1
106	0802 5019	Tapping Round Head Screw - M4 x 10	2
107	0965 4010W	Tapping Screw with Flat Washer - M4 x 10	2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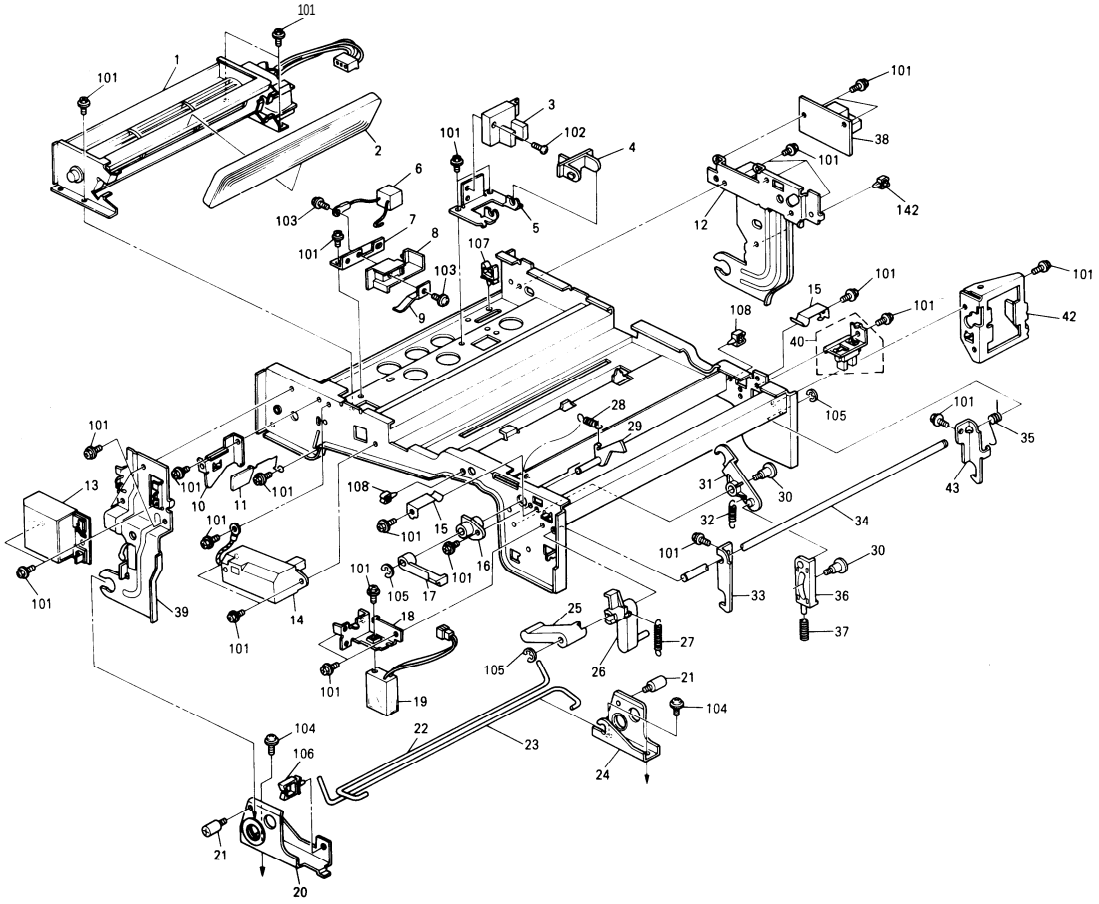
2. OPTICS SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 1907	Exposure Glass Ass'y - RIC (USA)	1
	5216 1908	Exposure Glass Ass'y - 220V	1
	5216 1909	Exposure Glass Ass'y - RIC (ROC)	1
2	5216 1925	Slider Cover	1
3	5216 1929	Exposure Glass	1
4	5216 1938	Sub Scale - RIC (USA)	1
	5216 1928	Sub Scale - RIC (ROC)	1
	5216 1948	Sub Scale - 220V	1
5	5216 1937	Main Scale - RIC (USA)	1
	5216 1930	Main Scale - RIC (ROC)	1
	5216 1947	Main Scale - 220V	1
6	5216 1912	Slider Drive Cable	1
7	5216 1913	Tightener Spring	1
8	5447 2768	Stepped Screw - M3	1
9	5216 1920	Slider Dumper	1
10	5216 1918	Slider Rail	1
11	5216 5250	Quenching Lamp	1
12	5216 1657	Leaf Spring - F.L. Hold	1
13	5216 5207	Flourescent Lamp Socket	1
14	5216 5555	Fluorescent Lamp - 115V	1
	5216 5655	Fluorescent Lamp - 220V	1
16	5216 2422	Leaf Spring - Master Earth	1
17	5216 5301	Main Harness	1
18	5216 1651	Fiber Optics	1
21	5216 2051	Charge Corona Ass'y	1
22	5216 1658	Front Holder - Fiber Optics	1
23	5216 1659	Rear Holder - Fiber Optics	1
24	5216 1661	Exposure Reflector	1
25	5216 1668	Leaf Spring - Fiber Optics	2
26	5216 5120	Exposure Sensor	1
27	5216 1655	Fiber Optics Bracket	1
28	5216 5255	Erase Lamp Unit	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
29	5216 5101	Main Board Ass'y	1
30	5203 2058	Front End Block - Charge	1
31	5216 2055	Charge Corona Casing	1
32	5203 2062	Charge Corona Holder	1
33	5214 2080	Thumb Screw - M4 x 5	1
34	5203 2057	Rear End Block - Charge	1
35	5216 5325	High Voltage Supply Cord - Charge	1
36	5203 2060	Corona Wire Screw - M3 x 4	1
37	5203 2059	Corona Wire Hook	1
38	5216 9001	Corona Wire - 10 pcs/Set	1
39	5203 2061	Rear End Cover - Charge	1
101	0353 0060F	Philips Pan Head Bind Screw - M3 x 6	3
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	21
103	0312 5060W	Philips Pan Head Screw - M2.5 x 6	1
104	0720 0030E	Retaining Ring - M3	1

3. UPPER UNIT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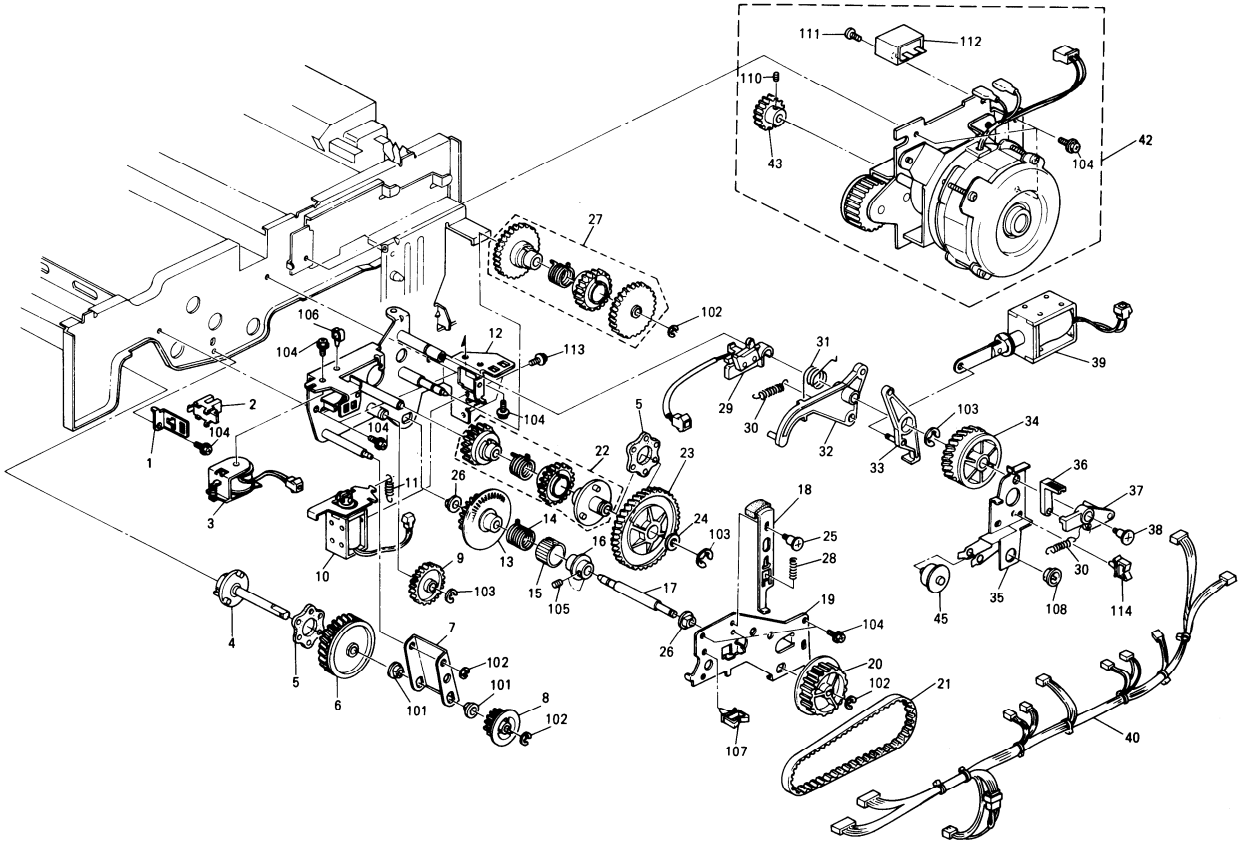
Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 5510	Cooling Fan Motor - 115V/60Hz	1
	5216 5610	Cooling Fan Motor - 220V/50Hz	1
	5216 5680	Cooling Fan Motor - 220V/60Hz	1
2	5216 1077	Ozone Filter	1
3	5216 5233	Photointerruptor - IL-G-4P-S3T2-E	1
4	5216 2441	Shielding Plate - T.O.F.	1
5	5216 5856	Photointerruptor Bracket	1
6	5214 5202	Varistor - 820V	1
7	5216 2402	Varistor Bracket	1
8	5203 2403	Varistor Holder	1
9	5216 2404	Leaf Spring - Varistor	1
10	5216 5114	Left Bracket - Operation Panel	1
11	5216 1072	Release Hook - Master Unit	1
12	5216 1119	Upper Hinge Bracket - Rear	1
13	5216 5216	Fluorescent Lamp Stabilizer	1
14	5216 5201	Power Pack - Charge	1
15	5216 1073	Left Spring	2
16	5216 1093	Slider Actuator Bushing	1
17	5216 1097	Release Lever Stopper	1
18	5216 5116	Right Bracket - Operation Panel	1
19	5216 5224	Total Counter	1
20	5216 1112	Lower Hinge Bracket - Front	1
21	5203 1125	Stopper Pin - Top Unit	2
22	5216 1122	Rear Torsion Spring	1
23	5216 1121	Front Torsion Spring	1
24	5216 1117	Lower Hinge Bracket - Rear	1
25	5216 1091	Release Lever - Top Unit	1
26	5216 1098	Lock Release Arm	1
27	5216 1100	Release Lever Spring	1
28	5216 1096	Slider Actuator Spring	1
29	5216 1094	Slider Actuator	1
30	5203 2679	Pinion Tightening Screw - M4 x 5	2
31	5216 2412	Pressure Arm	1
32	5216 2414	Pressure Release Spring	1
33	5216 1089	Front Lock Pawl	1
34	5216 1088	Lock Pawl Shaft	1
35	5216 1092	Lock Pawl Spring	1
36	5216 2410	Pressure Ann Lever	1
37	5216 2413	Pressure Arm Spring	1
38	5216 5415	AC Drive Board Ass'y - 115V	1
	5216 5615	AC Drive Board Ass'y - 220V	1
39	5216 1115	Upper Hinge Bracket - Front	1
40	5216 3170	Toner End Sensor Ass'y	1
42	5216 1302	Key Counter Bracket	1
43	5216 1090	Rear Lock Pawl	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	32
102	0313 0100E	Philips Pan Head Screw - M3 x 10	1
103	0965 3006W	Tapping Screw with Flat Washer - M3 x 6	2
104	0964 4008W	Tapping Screw with Flat Washer - M4 x 8	3
105	0720 0040E	Retaining Ring - M4	3
106	1105 0197	Wire Saddle	1
107	1105 0196	Harness Clamp	1
108	1105 0199	clamp	

4. DRIVE SECTION

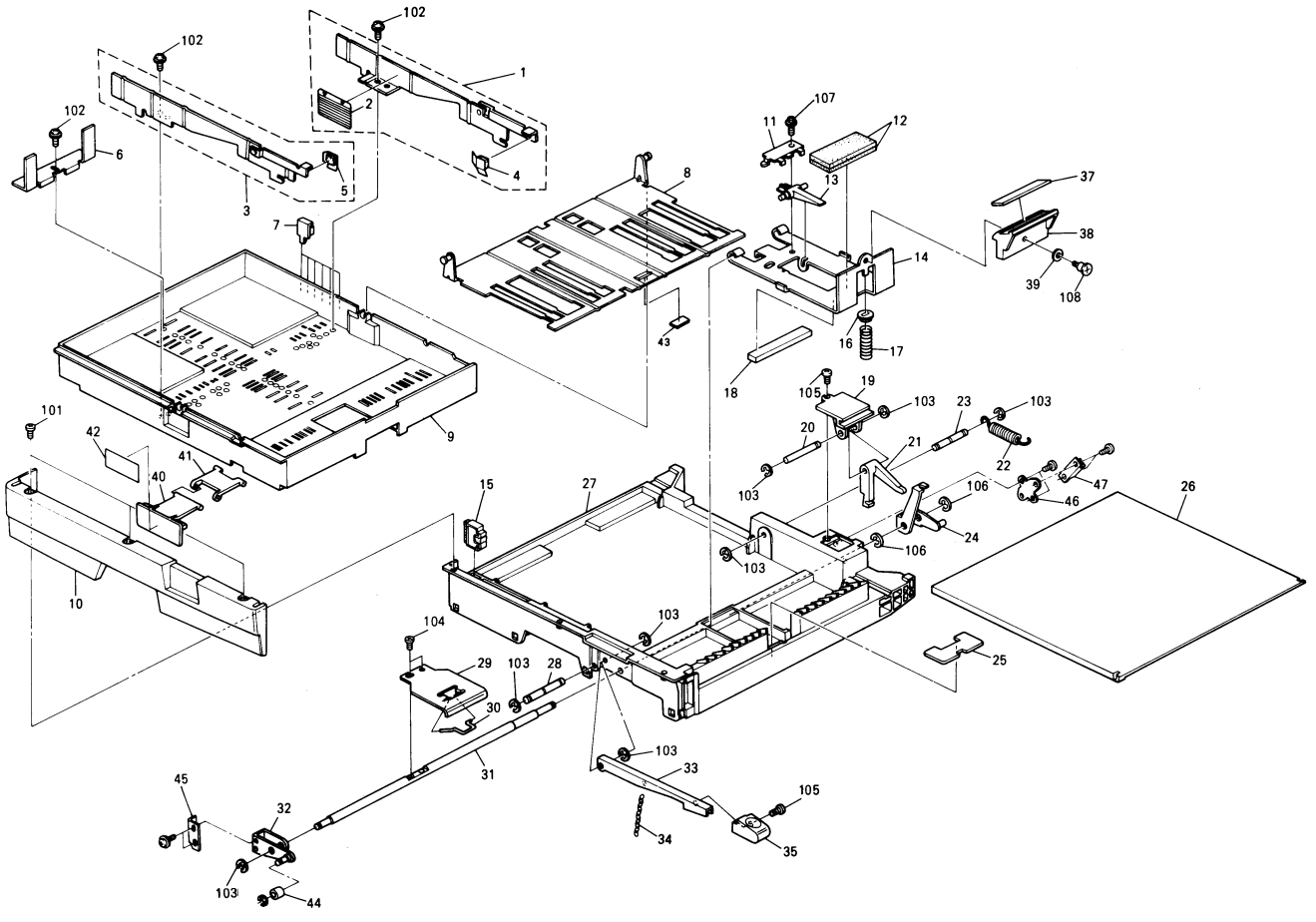


4. DRIVE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 1876	Photointerruptor Bracket	1
2	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
3	5216 5278	Short Return Solenoid	1
4	5216 2284	Master Drive Shaft	1
5	5203 1831	Rubber Dumper	2
6	5216 2287	Gear - 48T	1
7	5216 2267	Drive Arm - Master Unit	1
8	5216 1171	Drive Pulley - 14T	1
9	5203 1853	Gear - 30T	1
10	5216 1180	Master Unit Solenoid - DC24V	1
11	5216 1174	Spring - Master Unit Solenoid	1
12	5216 1811	Clutch Base Plate	1
13	5216 1166	Gear - 30T	1
14	5053 0465	Spring Clutch	1
15	5413 1175	Ratchet Sleeve - Paper Feed	1
16	5442 4774	Clutch - Drum	1
17	5216 1165	Drive Shaft - Master Unit	1
18	5216 1870	Brake Arm	1
19	5216 1862	Slider Clutch Bracket	1
20	5216 1170	Drive Pulley - 21T	1
21	5216 1172	Timing Belt - 120XL	1
22	5216 1822	Reverse Clutch	1
23	5216 1828	Bevel Gear - 53T (Return)	1
24	5203 1870	Flat Washer - M8	1
25	5447 2768	Stepped Screw - M3	1
26	5053 0447	Bushing - 6 X 1 O X 6 M M	2
27	5216 1821	Forward Clutch	1
28	5216 1872	Brake Spring	1
29	5216 5239	Microswitch - Home Position	1
30	5216 1840	Slider Lock Spring	2
31	5216 1841	Clutch Pawl Spring	1
32	5216 1838	Return Clutch Pawl	1
33	5216 1837	Forward Clutch Pawl	1
34	5216 1844	Pinion - 36T	1
35	5216 1864	Drive Wire Bracket	1

Index No.	Parts No.	Description	Q' ty Per Ass'y
36	5216 1858	Slider Lock Lever	1
37	5216 1856	Slider Release Lever	1
38	5216 1859	Stepped Screw - Slider Lock	1
39	5216 1842	Slider Solenoid - DC24V	1
40	5216 5300	Rear Unit Harness	1
42	5216 5506	Main Motor Ass'y - l15V/60Hz	1
	5216 5606	Main Motor Ass'y - 220V/50Hz	1
	5216 5608	Main Motor Ass'y - 220V/60Hz	1
43	5216 5860	Output Gear - 50Hz	1
	5216 5861	Output Gear - 60Hz	1
44	5203 1869	Thrust Washer - 6 x 12 x 1.5MM	1
45	5216 1176	Belt Tension Pulley	1
101	5053 0447	Bushing - 6 X 1 O X 6 M M	2
102	0720 0040E	Retaining Ring - M4	4
103	0720 0060E	Retaining Ring - M6	3
104	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
105	0574 0050W	Hexagon Headless Set Screw - M4 x 5	2
106	1105 0199	cl amp	1
107	1105 0197	Wire Saddle	1
108	1106 0458	Bushing - 9.9MM	1
109	1105 0196	Harness Clamp	1
110	0574 0040W	Hexagon Headless Set Screw - M4 x 4	1
111	0314 0080B	Philips Pan Head Screw - M4 x 8	1
112	1606 1524	Capacitor - 8UF 220V	1
	1606 1525	Capacitor - 5UF 250V	1
113	0313 0050W	Philips Pan Head Screw - M3 x 5	1
114	1105 0106	Wire Saddle	1

5. PAPER CASSETTE SECTION



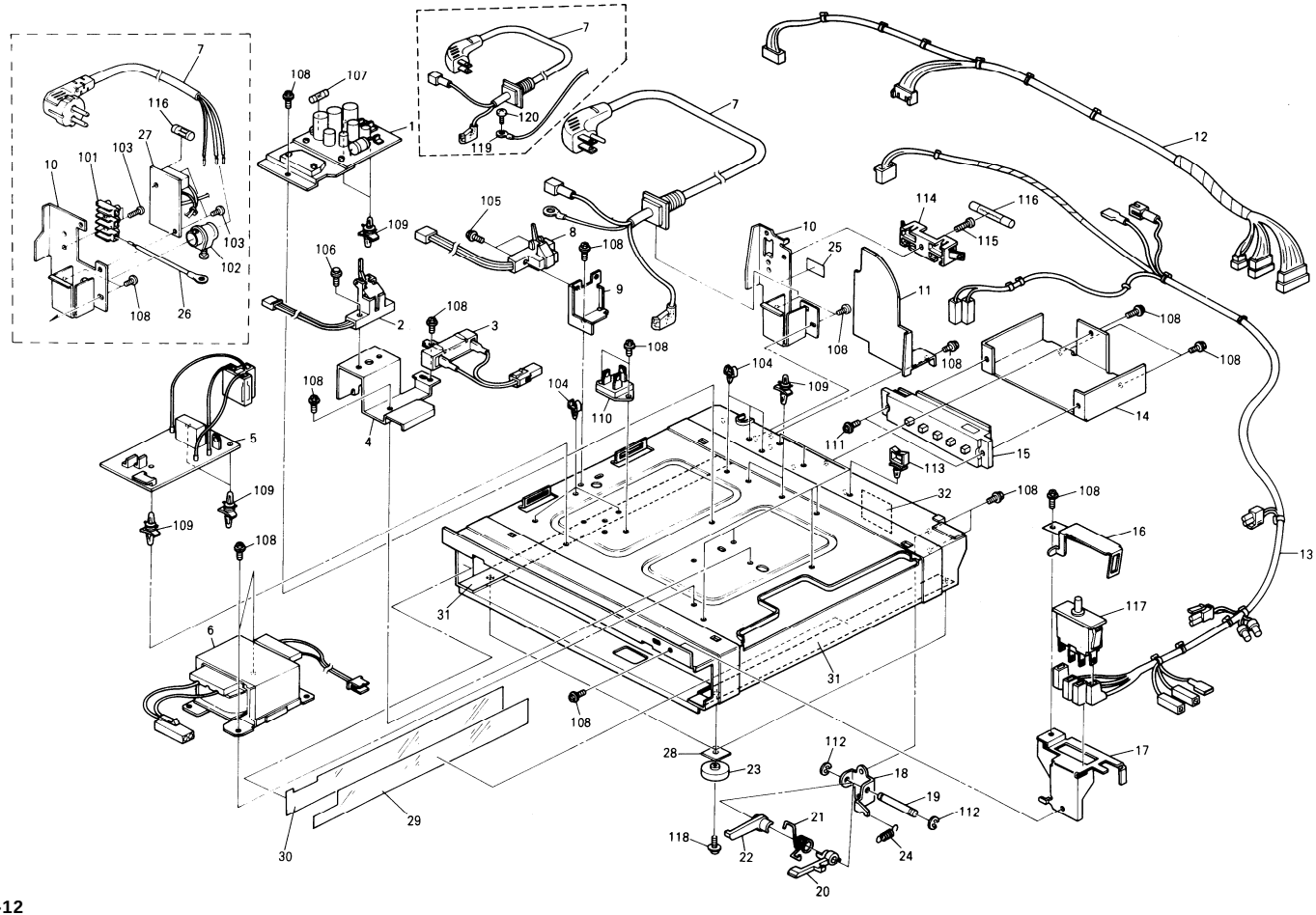
5. PAPER CASSETTE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2763	Left Side Fence	1
2	5413 4835	Decal - Paper Level	1
3	5216 2764	Right Side Fence	1
4	5215 2720	Front Side Holder	1
5	5215 2731	Rear Side Holder	1
6	5447 2941	Rear Fence	1
7	5216 2762	Paper Size Actuator	5
8	5215 2710	Bottom Plate	1
9	5216 2761	Cassette Body - RIC (220V, ROC)	1
	5216 2770	Cassette Body - RIC (USA)	1
10	5216 2802	Cassette Tray Cover	1
11	5216 2835	Hook Lever Cover	1
12	5216 2834	Friction Bracket Pad	2
13	5216 2836	Hook Lever	1
14	5216 2817	Friction Bracket	1
15	5216 4975	Cleaner - Fiber Optics/Corona Wire	1
16	5216 2833	Pressure Spring Holder	1
17,	5216 2820	Pad Pressure Spring	1
18	5216 2838	Magnet - 8 x 54MM	1
19	5216 2806	Lock Holder Cover	1
20	5216 2805	Lock Shaft	1
21	5216 2804	Lock Lever	1
22	5216 2807	Cassette Lift Spring	1
23	5216 2808	Lift Spring Shaft	1
24	5216 2813	Cassette Lift Bracket	1
25	5216 2845	Magnet	1
26	5216 2788	Cassette Cover	1
27	5216 2795	Cassette Tray - RIC, NSA	1
28	5216 2821	Release Lever Shaft	1
29	5216 2815	Cassette Lift Arm	1
30	5216 2841	Release Hook	1
31	5216 2809	Cassette Lift Shaft	1
32	5216 2810	Lift Release Bracket	1
33	5216 2822	Pressure Lift Lever	1
34	5216 2840	Grounding Chain - 10P	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
35	5216 2824	Cassette Release Knob	1
37	5216 2844	Friction Pad	
38	5216 2818	Pad Holder	
39	5216 2830	Friction Pad Spacer	1
40	5216 2886	Cassette Size Panel	1
41	5216 2888	Size Panel Holder - RIC, NSA	
42	5216 2786	Cassette Size Decal	1
43	5215 2713	Bottom Plate Pad	1
44	5216 2826	Roller - Pressure Release Bracket	1
45	5216 2827	Stopper Bracket - Cassette Tray	1
46	5216 2846	Magnet Catch Bracket	1
47	5054 0536	Magnet Catch Ass'y	1
101	0353 0060W	Philips Pan Head Bind Screw	3
102	0965 4008W	Tapping Screw with Flat Washer - M4 x 8	3
103	0720 0040E	Retaining Ring - M4	8
104	0314 0080W	Philips Pan Head Screw - M4 x 8	2
105	0353 0060W	Philips Pan Head Bind Screw	2
106	0720 0060E	Retaining Ring - M6	2
107	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	1
108	0313 0080W	Philips Pan Head Screw - M3 x 8	1

6. LOWER UNIT

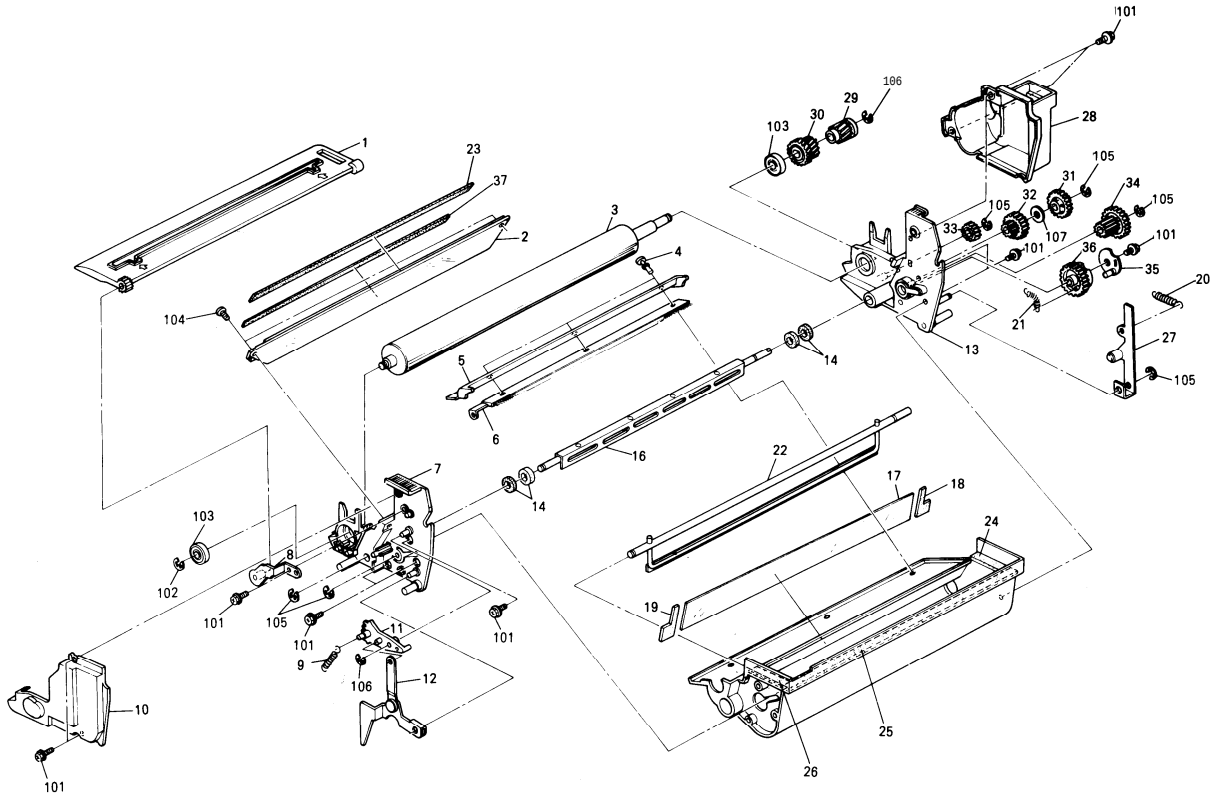
October 1,'85



6. LOWER UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 5150	DC Power Supply Board	1
2	5214 5235	Paper Feed Sensor	1
3	5203 5535	Ceramic Resistor - 115V/5.2K Ohm	1
	5203 5635	Ceramic Resistor - 240V/23K Ohm	1
4	5216 2702	Paper Feed Sensor Bracket	1
5	5216 5445	Fusing Power Board Ass'y - 115V	1
	5216 5645	Fusing Power Board Ass'y - 220V	1
6	5216 5530	Transformer - 115v	1
	5216 5630	Transformer - 220V	1
7	5216 5501	Power Supply Cord - 115V	1
	2801 0027	Power Supply Cord - 220/240V	1
	5216 5401	Power Supply Cord - 11OV	1
8	5216 5236	Exit Sensor	1
9	5216 4179	Exit Sensor Bracket	1
10	5216 5850	Power Supply Cord Bracket - 115V	1
	5216 5880	Power Supply Cord Bracket - 220/240V	1
11	5216 5851	Safety Cover	1
12	5216 5302	Lower Unit Harness	1
13	5216 5310	AC Harness	1
14	5216 2862	Bracket - Paper Size Switch	1
15	5216 5213	Paper Size Switch	1
16	5216 5806	Safety Switch Lever	1
17	5216 5805	Safety Switch Bracket	1
18	5216 1157	Unlock Lever Bracket	1
19	5216 2855	Unlock Lever Shaft	1
20	5216 2851	Unlock Lever	1
21	5216 2853	Spring - Twist	1
22	5216 2852	Unlock Arm	1
23	5216 1159	Rubber Foot	4
24	5216 2854	Unlock Lever Spring	1
25	5448 4973	Decal - English	1
26	5216 5675	Grounding Wire	1
27	5216 5685	Noise Filter Board - 220/240V	1
28	5216 1163	Plate Nut - Rubber Foot	4
29	5216 2847	Cassette Tray Guide - Left	1
30	5216 2848	Cassette Tray Guide - Right	1
31	5216 2849	Cassette Tray Guide - Lower	1
32	5216 2850	Mylar - 40 x 40mm	1
101	1101 0359	Terminal - 3P	1
102	1106 0442	Cord Clamp - 220/240V	1
103	0313 0160W	Philips Pan Head Screw - M3 x 16	2
104	1105 0199	Cl amp	6
105	0313 0100W	Philips Pan Head Screw - M3 x 10	2
106	0313 0120W	Philips Pan Head Screw - M3 x 12	1
107	1107 0391	Fuse - 5A, 125V	1
108	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	17
109	1102 0895	Nylon Stud	6
110	1405 0153	Triac - TG16C40	1
111	0313 0100E	Philips Pan Head Screw - M3 x 10	2
112	0720 0040E	Retaining Ring - M4	2
113	1105 0197	Wire Saddle	1
114	1104 0322	Fuse Holder - 220/240V	1
115	0313 0080W	Philips Pan Head Screw - M3 x 8	1
116	1107 0485	Fuse - 15A, 125V	1
116	1107 0486	Fuse - 8A, 250V	1
117	1204 1373	Push Switch	1
118	0951 3006W	Philips Screw with Flat Washer - M3 x 6	4
119	1802 2802	Grounding Wire - RIC (ROC)	1
120	0314 0080M	Philips Pan Head Screw - M4 x 8 (ROC)	1

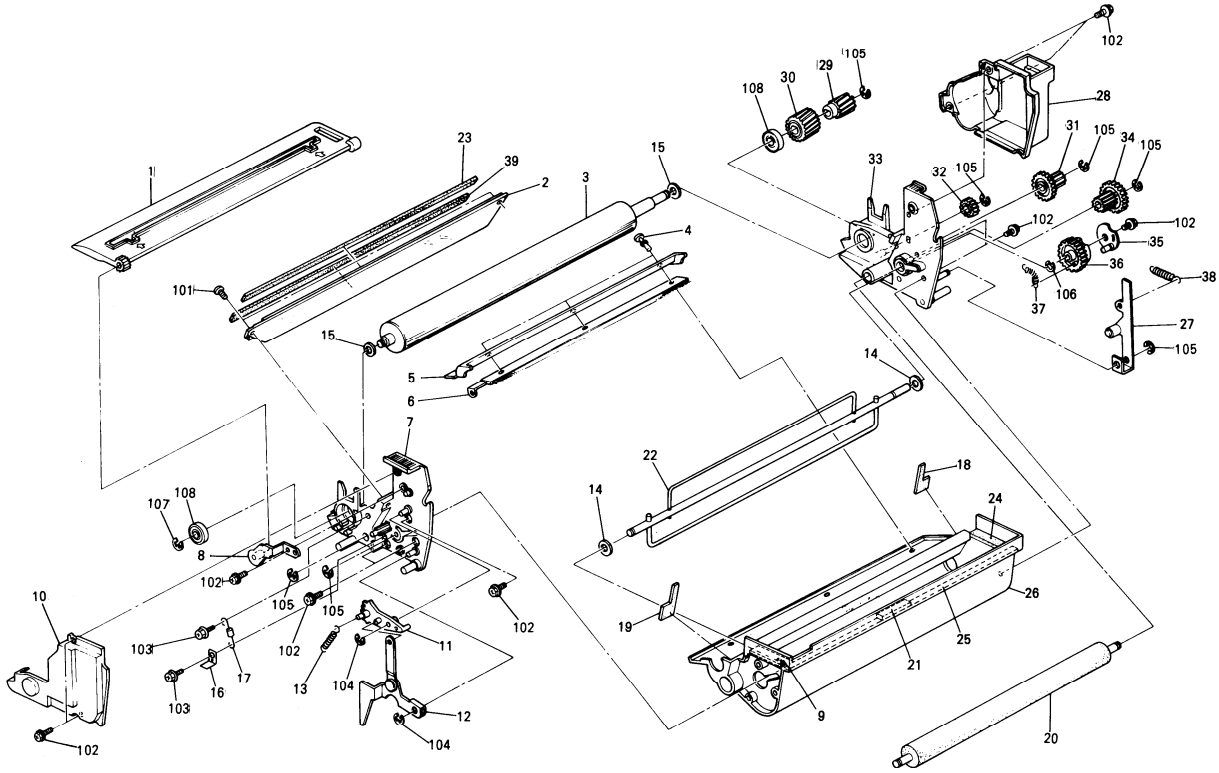
7. BLACK DEVELOPMENT UNIT



7. BLACK DEVELOPMENT UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
*	5216 3050	Development Unit - Black	1
1	5216 3110	Development Roller Cover	1
2	5216 3080	Toner Metering Blade	1
3	5216 3180	Black Development Roller	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5216 3051	Front Side Plate - Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5216 3113	Roller Cover Spring	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3060	Rear Side Plate - Development	1
14	5216 3095	Seal - Toner Supply Bar	4
16	5216 3098	Toner Supply Bar	1
17	5216 3087	Toner Supply Mylar	1
18	5216 3067	Rear Side Seal	0
19	5216 3066	Front Side Seal	1
20	5216 3133	Drive Spring - Toner End	1
21	5216 3105	Toner End Spring	1
22	5216 3090	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front Cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
26	5927 3085	Front Toner Hopper Seal - Color	1
27	5216 3130	Toner End Actuator	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5214 3100	Gear - 24T	1
31	5214 3102	Gear - 20T	1
32	5214 3101	Gear - 12T	1
33	5214 3103	Gear - 18T	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5216 3083	Seal - OBM	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
102	0720 0060E	Retaining Ring - M6	1
103	0805 3162	Ball Bearing - 10 x 19 x 7mm	2
104	0313 0060W	Philips Pan Head Screw - M3 x 6	2
105	0720 0040E	Retaining Ring - M4	6
106	0720 0030E	Retaining Ring - M3	2
107	0701 0050E	Flat Washer - M5	1

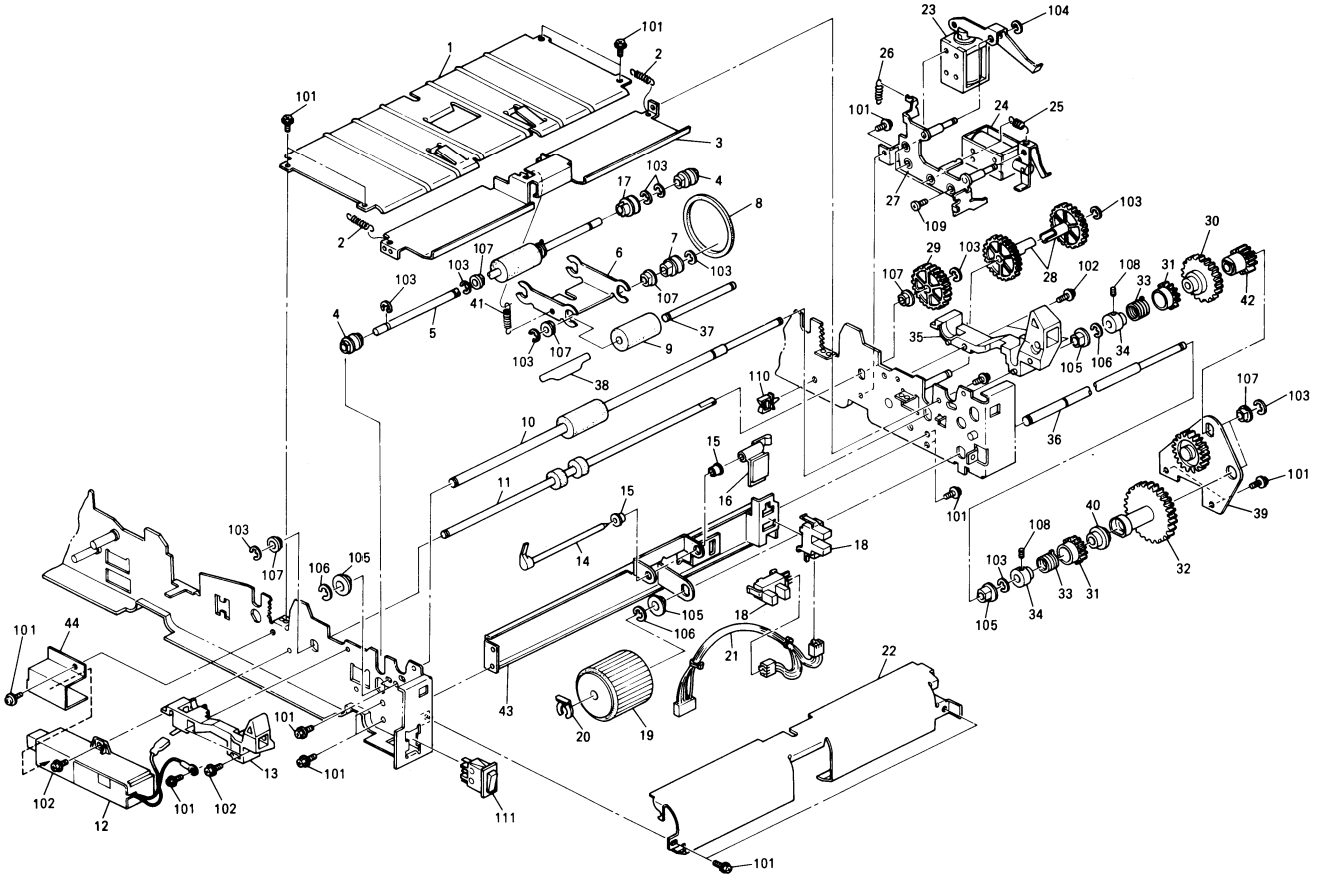
8. COLOR DEVELOPMENT UNIT



8. COLOR DEVELOPMENT UNIT

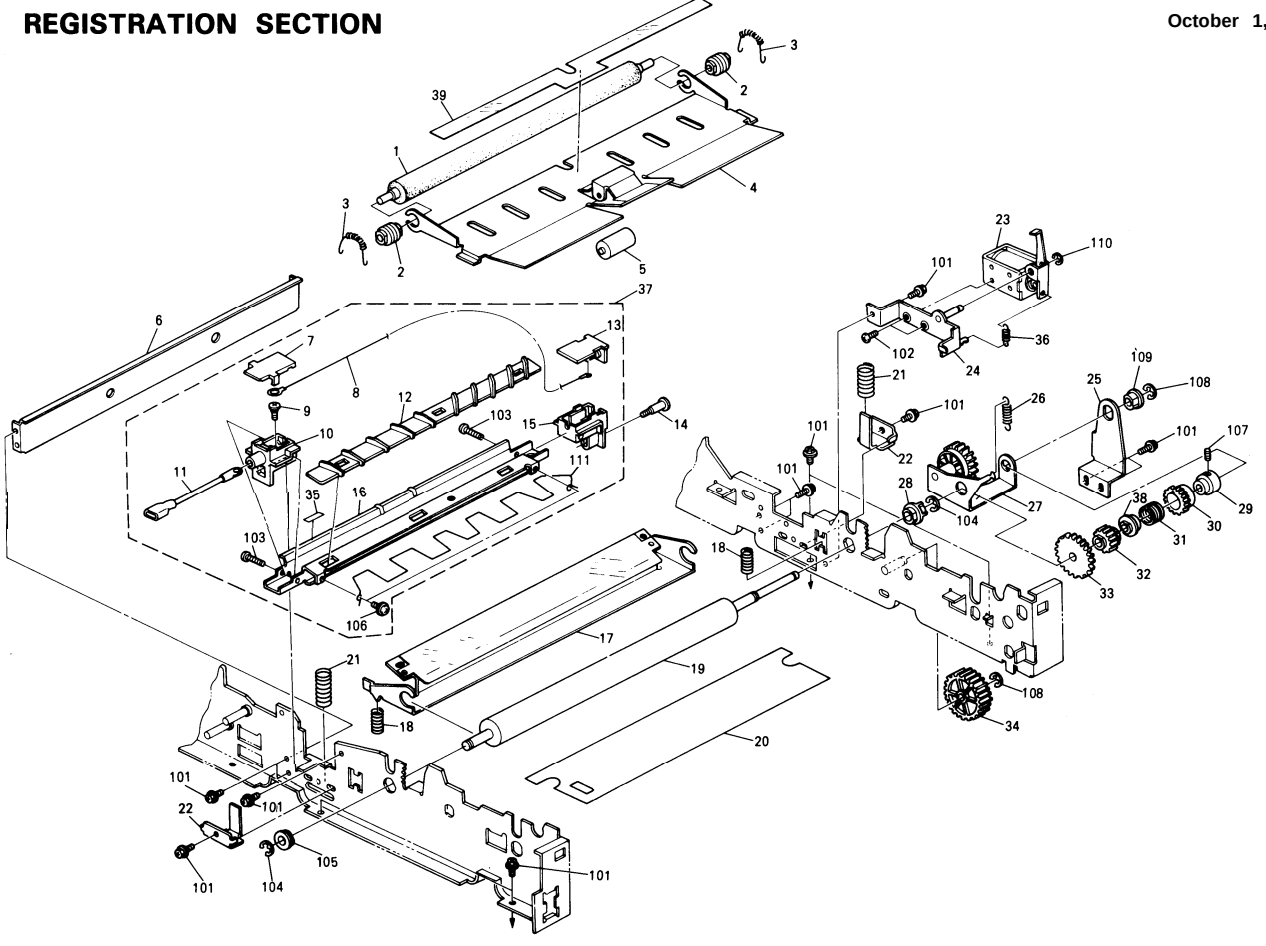
Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 3110	Development Roller Cover	1
2	5927 3091	Toner Metering Blade - Color	1
3	5927 3130	Color Development Roller	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5927 3061	Front Side Plate - Color Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5927 3085	Front Toner Happer Seal - Color	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3113	Roller Cover Spring	1
14	5921 3103	Seal - Toner Mixing Bar	2
15	5921 3084	Seal - Toner Supply Bar	2
16	5927 3067	Grounding Plate	1
17	1402 0560	Varistor - -180V ±10%	1
18	5216 3069	Rear Side Seal	1
19	5216 3068	Front Side Seal	1
20	5927 3114	Toner Supply Roller	1
21	5927 3088	Toner Hopper Seal - Upper	1
22	5927 3100	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
27	5927 3120	Toner End Actuator - Color	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5921 3110	Gear - 20T	1
31	5921 3111	Gear - 16T	1
32	5214 3101	Gear - 12T	1
33	5927 3071	Rear Side Plate - Color Development	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5927 3105	Toner End Spring - Color	1
38	5216 3133	Drive Spring - Toner End	1
39	5216 3083	Seal - OBM	1
101	0313 0060W	Philips Pan Head Screw - M3 x 6	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	12
103	0443 0062W	Hexagon Head Tapping Screw - M3 x 6	2
104	0720 0030E	Retaining Ring - M3	3
105	0720 0040E	Retaining Ring - M4	5
106	0720 0050E	Retaining Ring - M5	1
107	0720 0060E	Retaining Ring - M6	1
108	0805 3162	Ball Bearing - 10 x 19 x 7mm	2

9. PAPER FEED SECTION



9. PAPER FEED SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2626	Lower Feed Guide	1
2	5216 2574	1st Relay Roller Spring	2
3	5216 2617	Guide Plate - Manual Feed	1
4	5216 2573	Registration Roller Bushing	2
5	5216 2606	1st Relay Roller	1
6	5216 2603	Manual Feed Bracket	1
7	5216 2605	Manual Feed Roller Pulley	1
8	5216 2609	Drive Belt - Manual Feed	1
9	5216 2601	Manual Feed Roller	1
10	5216 2571	1st Relay Roller - Lower	1
11	5216 2581	2nd Relay Roller - Lower	1
12	5216 5203	Power Pack - Transfer/Bias	1
13	5216 3160	Front Development Guide	1
14	5216 2715	Feeler Lever - Manual Feed	1
15	5443 2668	Bushing	2
16	5216 2717	Sensor Actuator	1
17	5216 2604	1st Relay Roller Pulley	1
18	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	2
19	5216 2552	Paper Feed Roller	1
20	5215 2621	Snap Ring - M6	1
21	5216 5333	Manual Feed Harness	1
22	5216 2616	Paper Turn Guide	1
23	5216 2744	1st Relay Solenoid	1
24	5216 2746	Paper Feed Solenoid	1
25	5216 2748	Spring - Paper Feed Solenoid	1
26	5216 2737	Registration Solenoid Spring	1
27	5216 2741	Bracket - Paper Feed Solenoid	1
28	5216 2643	Idle Gear - 40T (B)	1
29	5216 2582	Gear - 32T	1
30	5216 2655	Gear - 36T (Grip)	1
31	5216 2634	Feed Clutch Sleeve	2
32	5216 2632	Gear - 50T	1
33	5216 2633	Clutch Spring	2
34	5216 2635	Clutch Output Hub	2
35	5216 3162	Rear Development Guide	1
36	5216 2551	Feed Roller Shaft	1
37	5216 2608	Belt Drive Shaft - Manual Feed	1
38	5216 2618	Mylar Manual Feed Bracket	1
39	5216 2622	Bracket - Paper Feed Clutch	1
40	5216 2636	Clutch Input Hub	1
41	5216 2599	Spring - Manual Feed Bracket	1
42	5216 2656	Gear - 18T	1
43	5216 2712	Paper Feed Bracket	1
44	5216 5820	Power Pack Cover - Transfer/Bias	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	16
102	0443 0080W	Hexagon Head Tapping Screw - M3 x8	5
103	0720 0040E	Retaining Ring - M4	11
104	0720 0030E	Retaining Ring - M3	1
105	0805 3386	Bushing - 8MM	5
106	0720 0060E	Retaining Ring - M6	3
107	0805 3385	Bushing - 6MM	7
108	0574 0040E	Hexagon Headless Set Screw - M4 x4	2
109	0313 0050W	Philips Pan Head Screw - M3 x 5	4
110	1105 0196	Harness Clamp	1
111	1204 1386	Main Switch	1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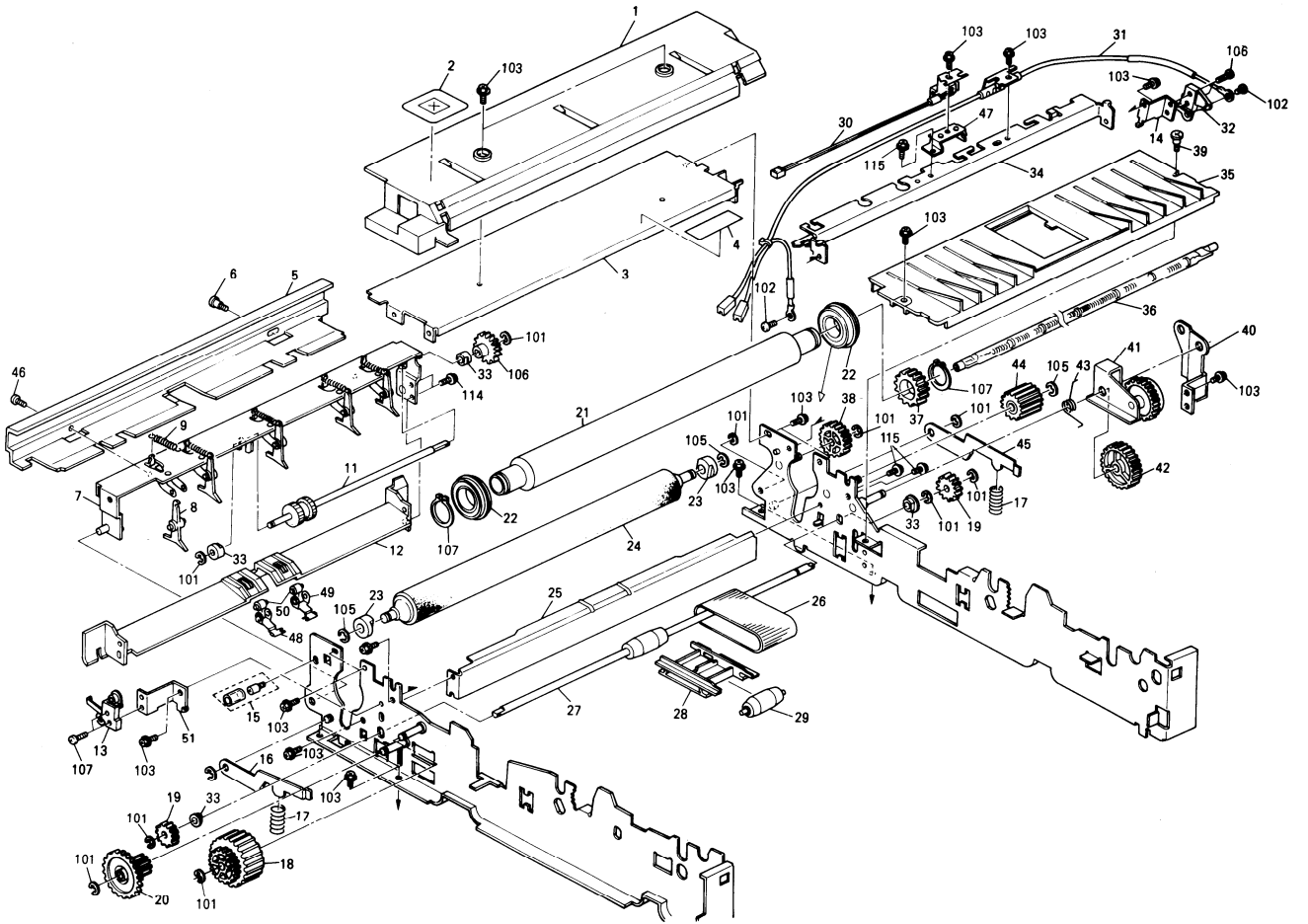
10. REGISTRATION SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2592	Upper Registration Roller	1
2	5216 2573	Registration Roller Bushing	2
3	5216 2593	Registration Roller Spring	2
4	5216 2612	Upper Guide Plate - Registration	1
5	5216 2615	2nd Relay Roller - Upper	1
6	5216 1133	Base Plate Stay	1
7	5216 2104	Front End Cover - Transfer Corona	1
8	5216 9001	Corona Wire - 10 pcs/Set	1
9	5203 2060	Corona Wire Screw - M3 x 4	1
10	5216 2103	Front End Block - Transfer	1
11	5216 5320	High Voltage Supply Cord - Transfer	1
12	5216 2115	Transfer Guide Plate	1
13	5203 2108	Rear End Cover - Transfer Corona	1
14	5216 2113	Stepped Screw - Transfer	1
15	5216 2107	Rear End Block - Transfer	1
16	5216 2111	Transfer Corona Casing	1
17	5216 2121	Guide Plate - Transfer Entrance	1
18	5203 2133	Pressure Spring - Transfer Corona	2
19	5216 2591	Lower Registration Roller	1
20	5216 2124	Insulating Sheet	1
21	5216 2112	Pressure Spring	2
22	5216 2110	Pressure Spring Holder	2
23	5216 2731	Registration Solenoid	1
24	5216 2732	Registration Solenoid Bracket	1
25	5216 2677	Safety Cover - Registration Roller	1
26	5216 2676	Engage Gear Bracket - Registration Roller	1
27	5216 2672	Spring - Engage Gear Bracket	1
28	5216 2678	Registration Roller Bushing - Rear	1
29	5216 2635	Clutch Output Hub	1
30	5216 2665	Registration Clutch Sleeve	1
31	5216 2664	Clutch Spring	1
32	5216 2663	Gear - 18T	1
33	5216 2662	Gear - 36T	1
34	5216 2642	Idle Gear - 40T	1
35	5216 2116	Mylar Seal - Transfer Guide Exit - RIC (USA)	1
36	5216 2737	Registration Solenoid Spring	1
37	5216 2102	Transfer Corona Ass'y - RIC (USA)	1
	5216 2101	Transfer Corona Ass'y - RIC (220V, ROC)	1
38	5216 2636	Clutch Input Hub	1
39	5216 2619	Mylar - Upper Guide Plate	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	12
102	0313 0050W	Philips Pan Head Screw - M3 x 5	2
103	0313 0220W	Philips Pan Head Screw - M3 x 22	2
104	0720 0060E	Retaining Ring - M6	2
105	0805 3386	Bushing - 8MM	1
106	0951 3008W	Philips Screw with Flat Washer - M3 x 8	2
107	0574 0040E	Hexagon Headless Set Screw - M4 x 4	1
108	0720 0040E	Retaining Ring - M4	2
109	0805 3385	Bushing - 6MM	1
110	0720 0030E	Retaining Ring - M3	1
111	0809 1013	Nylon Wire (50M/Roll)	1

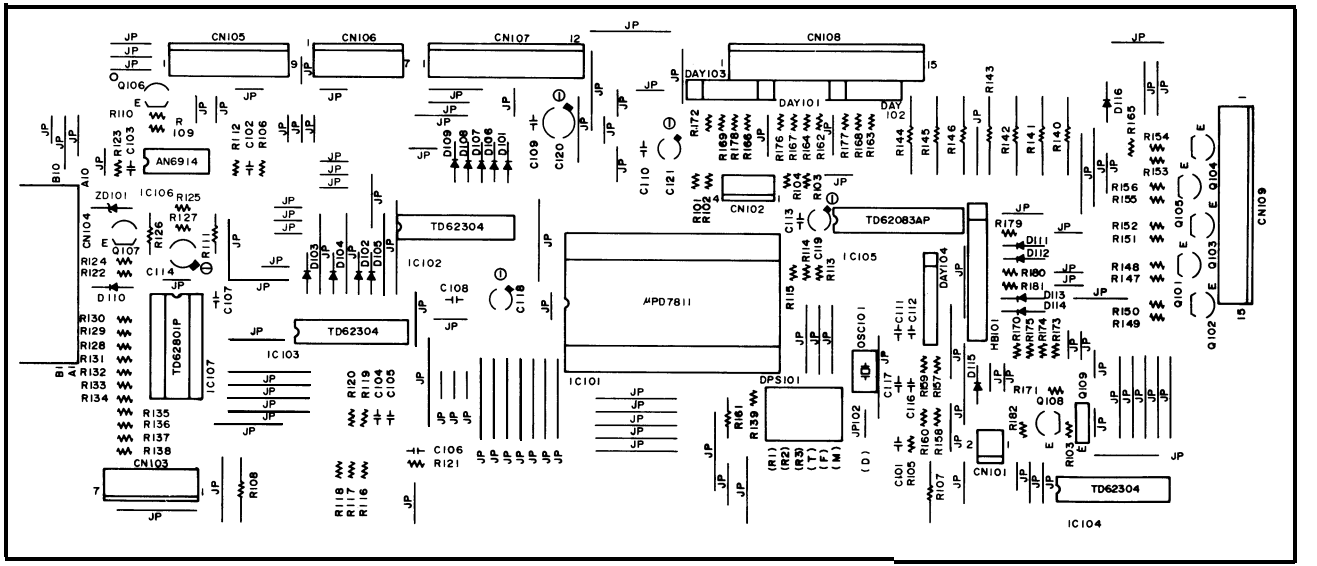
11. FUSING SECTION



11. FUSING SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 4169	Fusing Cover - 115V	1
	5216 4170	Fusing Cover - 220/240V	1
2	5442 4421	Decal - Small - 115V	1
	5442 6126	Small Decal - High Temperature - 220/240V	1
3	5216 4127	Fusing Stay	1
4	5216 4145	Thermofuse Decal	1
5	5216 4195	Exit Cover - RIC, NSA	1
6	5216 4221	Shoulder Screw - M3	1
7	5216 4180	Side Plate - Paper Exit	1
8	5216 9002	Hot Roller Stripper - 5 pcs/Set	1
9	5203 4168	Stripper Spring	5
10	5216 4205	Gear - 19T	1
11	5216 4202	Upper Exit Roller	1
12	5216 4197	Lower Guide Plate - Paper Exit - RIC, NSA	1
13	5216 4095	Front Heater Terminal	1
14	5216 4099	Rear Heater Bracket	1
15	5203 1124	Stopper Pin - Top Unit	1
16	5216 4085	Front Pressure Lever	1
17	5216 4090	Fusing Pressure Spring	2
18	5216 4133	Paper Reverse Knob	1
19	5216 3915	Gear - 18T	1
20	5216 4134	Idle Gear - 38T	1
21	5216 4106	Hot Roller	1
22	5216 4107	Ball Bearing - 37 x 20 x 9MM	2
23	5216 4118	Pressure Roller Bushing	2
24	5216 4110	Pressure Roller	1
25	5216 4155	Lower Guide Plate	1
26	5216 3914	Transport Belt	1
27	5216 3911	Driven Roller - Transport Belt	1
28	5216 3912	Transport Belt Holder	1
29	5214 3855	Inverted Roller - Transport Belt	1
30	5216 5258	Thermistor	1
31	5216 5425	Thermofuse - 169°C	1
32	5216 4100	Rear Heater Terminal	1
33	5216 4207	Bushing - 6MM	4

Index No.	Parts No.	Description	Q'ty Per Ass'y
34	5216 4143	Thermofuse Stay	1
35	5216 3903	Transport Guide Plate	1
36	5442 5722	Heater - 115V, 960W	1
36	5442 5752	Heater - 240V/960W	1
37	5214 4108	Gear - 30T	1
38	5216 4150	Gear - 24T	1
39	5206 2684	Shoulder Screw - M3	1
40	5216 4075	Bracket - Transfer Belt Gear	1
41	5216 4068	Fusing Drive Ann	1
42	5216 4073	Gear - 34T	1
43	5216 4072	Fusing Arm Spring	1
44	5216 4074	Gear - 20T	1
45	5216 4086	Rear Pressure Lever	1
46	5216 4220	Screw - M3	1
47	5216 4144	Thermistor Bracket	1
48	5216 4213	Front Guide Roller	1
49	5216 4215	Rear Guide Roller	1
50	5214 4235	Lower Exit Roller	2
51	5216 4103	Front Heater Bracket	1
101	0720 0040E	Retaining Ring - M4	11
102	0313 0060M	Philips Pan Head Screw - M3 x 6	2
103	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	20
104	0313 0100W	Philips Pan Head Screw - M3 x 10	4
105	0720 0060E	Retaining Ring - M6	3
106	0313 0050W	Philips Pan Head Screw - M3 x 5	2
107	0725 0200E	Retaining Ring - M20	2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D116
(R1)
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(R3)
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(M)
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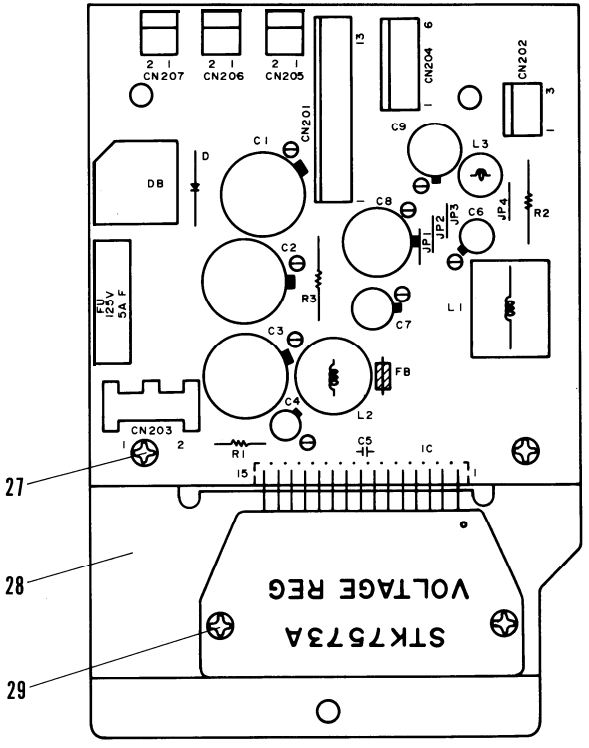
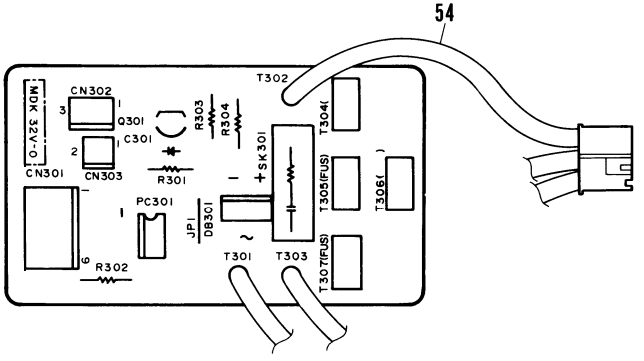
12. MAIN BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5216 5101	Main Board Ass'y	1
1	IC101	5216 5103	CPU - Main Board	1
2	IC102,103 IC104	1407 1348	IC - TD62304P	3
3	IC105	1401 0332	Transistor - TD62083AP	1
4	IC106	1408 0258	IC - AN6914	1
5	Q101 - 106	1400 0347	Transistor - 2SB1010	6
6	Q107,108	1400 0208	Transistor - 2SC945	2
7	D101 - 116	1401 0815	Diode - 1S1588	16
8	ZD101	1402 0524	Zener Diode - 4.6V, 400MW	1
9	OSC101	1503 0070	Ceramic Oscillator - 10MHz	1
10	DPS101	1204 1387	DIP Switch	1
11	DAY101 - 103	1401 0807	Diode Array	3
12	DAY104	1401 0787	Diode Array - UPA54H	1
13	HB101	1602 0911	Surge Killer - 0.01MF	1
14	C101 -113	1606 1336	Capacitor - 1000PF 50V	13
15	C116 - 117	1606 1184	Capacitor - 27PF 50V	2
16	C119,121	1604 1354	Capacitor - 100MF 10V	2
17	C120	1604 1386	Capacitor - 100MF 50V	1
18	C118	1604 1357	Capacitor - 470MF, 10V	1
19	C114	1604 1378	Capacitor - 1MF, 50V	1
20	CN101	1103 0778	Connector - 2P	1
21	CN102	1103 1770	Wafer - 4P	1
22	CN103,106	1103 1773	Pin Header - 7P	1
23	CN105	1103 1775	Pin Header - 9P	1
24	CN107	1103 1778	Pin Header - 12P	1
25	CN108	1103 1781	Pin Header - 15P (Brown)	1
26	CN109	1103 1795	Pin Header - 15P (Red)	1
27	CN140 - 146	1601 1810	Resistor - 380 OHM ±5%	7
28	R108	1622 1001	Resistor - lK OHM ±1%	1
29	R107	1622 4702	Resistor - 47.2K OHM 1/4W ±1%	1
30	R111	1611 4102	Resistor - 1K OHM 1/4T ±5%	1
31	R126	1611 4103	Resistor - 10K OHM 1/4T ±5%	1
32	R127,148,150, 152,154,156	1611 4102V	Resistor - 1K OHM 1/4W ±5%	6
33	R112	1611 4132V	Resistor - 1.3K OHM 1/4T ±5%	1
34	R130,104,147 149,151,153, 155	1611 4222V	Resistor - 2.2K OHM 1/4V ±5%	7
35	R158,160	1611 4332V	Resistor - 3.3K OHM 1/4W ±5%	2
36	R113 - 118 R123,183, R128 - 130	1611 4472V	Resistor - 4.7K OHM 1/4W ±5%	11
37	R109,124	1611 4103V	Resistor - 10K OHM 1/4T ±5%	2
38	R162 - 181	1611 4123V	Resistor - 12K OHM 1/4W ±5%	20
39	R105,106,110 R119 - 121, R157,159,182	1611 4223V	Resistor - 22K OHM 1/4W ±5%	9
40	R122	1611 4393V	Resistor - 39K OHM 1/4W ±5%	1
41	R101,102,125, R139	1611 4105V	Resistor - 100M OHM 1/4V ±5%	4
42	JP	1002 0307	Jumper Wire	
43	R161	1611 4472	Resistor - 4.7K OHM 1/4T ±5%	1
44	Q109	1400 0352	Transistor - 2SD1198A	

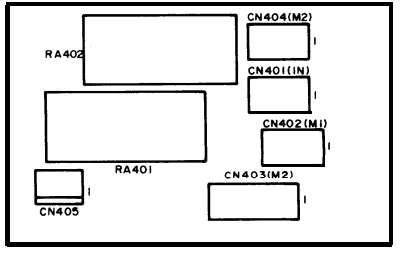
DC POWER SUPPLY BOARD



FUSING POWER SUPPLY BOARD



RELAY BOARD



13. PCBs

DC POWER SUPPLY BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*	- -	5216 5150	DC Power Supply Unit	1
1	L1	1607 0102	Choke Coil - 300MH 2A	1
2	L2	1607 0097	Choke Coil - 300MH 2A	1
3	L3	1607 0103	Choke Coil - 15MH 1A	1
4	FB	1607 0071	Inductor Coil	1
5	IC	1408 0414	Chopper Regulator	1
6	DB	1405 0136	Rectifier - 3B4B41LC1	1
7	D	1401 0840	Diode - 30D1	1
8	C 1 - 3	1604 1093	Capacitor - 1000MF 50V	3
9	C4	1604 1378	Capacitor - 1MF 50V	1
10	C5	1606 1333	Capacitor - 2200PF 50V	1
11	C6	1604 1355	Capacitor - 220MF 10V	1
12	C7	1604 1386	Capacitor - 100MF 50V	1
13	C8	1604 1440	Capacitor - 1000MF 35V	1
14	C9	1604 1358	Capacitor - 1000MF 10V	1
15	R1	1600 0678	Resistor - 4.7K OHM 1W	1
16	R2, 3	1600 0669	Resistor - 0.2 OHM 2W ±5%	2
17	FU	1107 0391	Fuse - 5A, 125V	1
18	-	1104 0351	Fuse Holder	2
19	JP1 - 4	1002 0307	Jumper Wire	
20	CN201	1103 1779	Pin Header - 13P	1
21	CN202	1103 1783	Connector - 3P	1
22	CN203	1103 3040	Spring Header - 2P	1
23	CN204	1103 1772	Pin Header - 6P	1
24	CN205	1103 1824	Pin Header - 2P (Red)	1
25	CN206	1103 1810	Pin Header - 2P (Brown)	1
26	CN207	1103 1838	Pin Header - 2P (Black)	1
27	-	0313 0050B	Philips Pan Head Screw-M3 x 5	2
28	-	5216 5852	DC Supply Board Bracket	1
29	-	0313 0120B	Philips Pan Head Screw-M3x 12	2

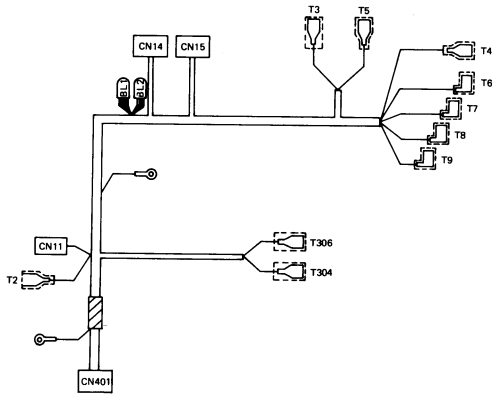
FUSING POWER SUPPLY BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*	-	5216 5445	Fusing Power Board Ass'y -115V	1
*	-	5216 5645	Fusing Power Board Ass'y-220V	1
40	PC301	1405 0127	Thyristor - TLP541G (115V)	1
		1405 0151	Photothyristor -TLP545J(220V)	1
41	Q301	1400 0305	Transistor - 2SC1815	1
42	DB301	1405 0130	Rectifier - 400V, 10A IG4B42 (115V)	1
		1405 0152	Rectifier - 1J4B42 (220V)	1
43	C301	1606 0689	Capacitor - O.O1µF 50V	1
44	R301	1611 4273	Resistor - 27K OHM 1/4T ±5%	1
45	R302	1611 5222	Resistor - 2.2K OHM 1/2W	1
46	R303	1611 4563	Resistor - 56K OHM 1/4T ±5%	1
47	R304	1611 5224	Resistor - 220K OHM 1/2W	1
48	JP1	1002 0307	Jumper Wire	1
49	SK301	1602 0940	Noise killer -O.1UF,1O OHM(115V)	1
		1602 0920	Noise killer - O.1µF, 120 OHM (220V)	1
50	CN301	1103 1814	Pin Header - 6P	1
51	CN302	1103 1769	Connector - 3P	1
52	CN303	1103 1768	Connector - 2P	1
53	T304-307	1100 0657	Fastening Tab	4
54	-	5216 5447	using Power Harness	1

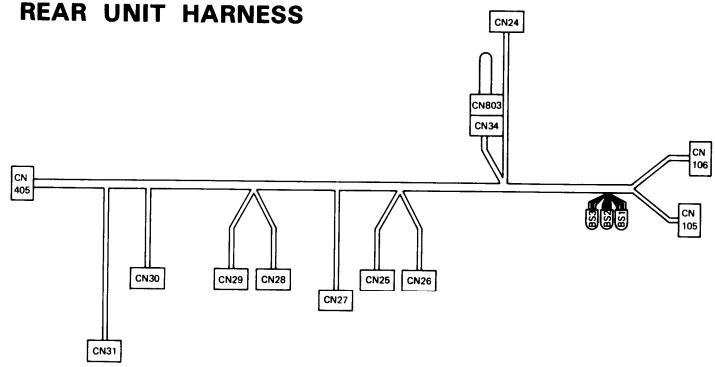
RELAY BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*	-	5216 5415	AC Drive Board Ass'y - 115V	1
	-	5216 5615	AC Drive Board Ass'y - 220V	1
60	CN401	1102 0766	Wafer - 2P	1
61	CN402	1103 1446	Wafer - 2P	1
62	CN403	1102 0484	Terminal - 3P	1
63	CN404	1103 1445	Wafer - 2P	1
64	CN405	1103 1769	Connector - 3P	1
65	RA401	1208 1041	Power Relay - DC24V	1
66	RA402	1208 1076	Power Relay - DC24V (115V)	1
		1208 1042	Power Relay - DC24V (220V)	1

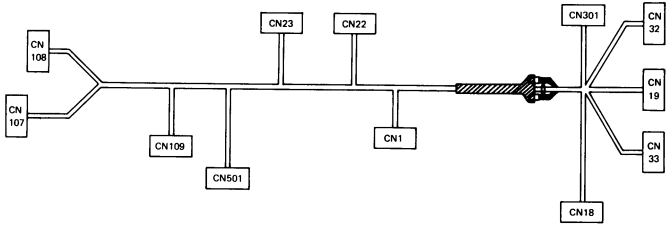
AC HARNESS



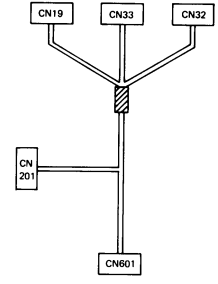
REAR UNIT HARNESS



MAIN HARNESS



LOWER UNIT HARNESS



14. HARNESS

AC HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*-		5216 5310	AC Harness	1
1	T5	1102 0717	Closed Terminal	1
		1100 0270	Fastening Receptacle	1
2	T3	1102 1402	Receptacle Housing - 1P	1
		1100 1171	Fastening Receptacle	1
3	T4,304, 306	1102 1404	Receptacle Housing	3
		1100 1171	Fastening Receptacle	3
4	T 6 - 9	1102 1842	Insulating Sleeve	4
		1100 0301	Fastening Receptacle	4
5	T2	1102 1842	Insulating Sleeve	1
		1100 0301	Fastening Receptacle	1
6	CN14	1102 1515	Connector - 2P	1
		1100 1241	Socket - MATE-N-LOCK	2
7	CN15	1102 1515	Connector - 2P	1
		1100 1241	Socket - MATE-N-LOCK	2
8	CN11	1102 1006	Plug - MATE-N-LOCK	1
		1100 1043	Pin - MATE-N-LOCK	1
9	CN401	1102 1822	Connector - 2P	1
		1100 1247	Terminal	2

MAIN HARNESS

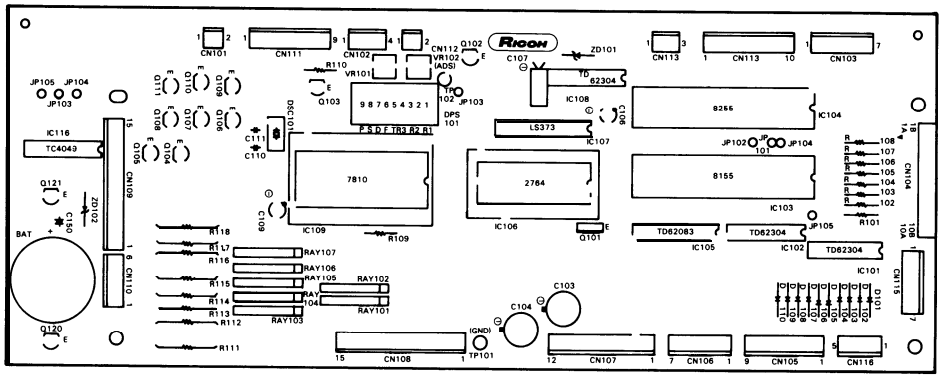
Index No.	Sketch No.	Parts No	Description	Q'ty Per Assembly
*		5216 5301	Main Harness	1
20	CN107	1102 1992	Socket Housing - 12P	1
		1100 1329	Socket Contact	12
21	CN108	1102 1995	Socket Housing - 15P	1
		1100 1329	Socket Contact	15
22	CN109	1102 2009	Socket Housing - 15P	1
		1100 1329	Socket Contact	15
23	CN301	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
24	CN501	1102 2110	Pin Housing - 15P	1
		11OO 12O4	Socket - MATE-N-LOCK	15
25	CN18	1102 1985	Socket Housing - 5P	1
		11OO 1329	Socket Contact	4
26	CN1	1102 1983	Socket Housing - 3P	1
		11OO 1329	Socket Contact	3
27	CN22	1102 1983	Socket Housing - 3P	1
		11OO 1329	Socket Contact	3
28	CN23	1102 1982	Socket Housing - 2P	1
		11OO 1329	Socket Contact	2
29	CN19	1102 1990	Socket Housing - 10P	1
		11OO 1329	Socket Contact	10
30	CN33	1102 1983	Socket Housing - 3P	1
		11OO 1329	Socket Contact	2
31	CN32	1102 2OOO	Socket Housing - 6P	1
		11OO 1329	Socket Contact	6

REAR UNIT HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5216 5300	Rear Unit Harness	1
40	CN105	1102 1989	Socket Housing - 9P	1
		1100 1329	Socket Contact	9
41	CN106	1102 1987	Pin Housing - MATE-N-LOCK-6P	1
		1100 1329	Socket Contact	7
42	CN405, 24,27	1102 1983 1100 1329	Socket Housing - 3P Socket Contact	3 9
43	CN31	1102 1984	Socket Housing - 4P	1
		1100 1329	Socket Contact	4
44	CN26, 29, 30	1102 1982 1100 1329	Socket Housing - 2P Socket Contact	3 6
45	CN25,28	1102 1996	Socket Housing - 2P	2
		1100 1329	Socket Contact	4
46	CN803	5408 5160A	Short Connector	1
47	BS1 - 3	1100 0878	Connection Cap	3
48	CN34	1102 0185	Connector - 4P	1
		1100 0844	Socket - Mate-N-Lock	4

LOWER UNIT HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5216 5302	Lower Unit Harness	1
60	CN201	1102 1993	Socket Housing - 13P	1
		1100 1329	Socket Contact	13
61	CN601	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
62	CN19	1102 2029	Pin Housing - 10P	1
		1100 1330	Socket Contact	10
63	CN33	1102 2025	Pin Housing - 3P	1
		1100 1330	Socket Contact	3
63	CN32	1102 2034	Pin Housing - 6P	1
		1100 1330	Socket Contact	6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Q103
C107
TD 62304
IC108
JP103
DPS 101
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P S D F TR3 R2 R1
LS373
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8255
IC104
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IC116
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C111
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IC106
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CN115
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C108
BAT
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R117
R116
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R112
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RAY107
RAY106
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RAY104
RAY102
RAY103
RAY101
R109
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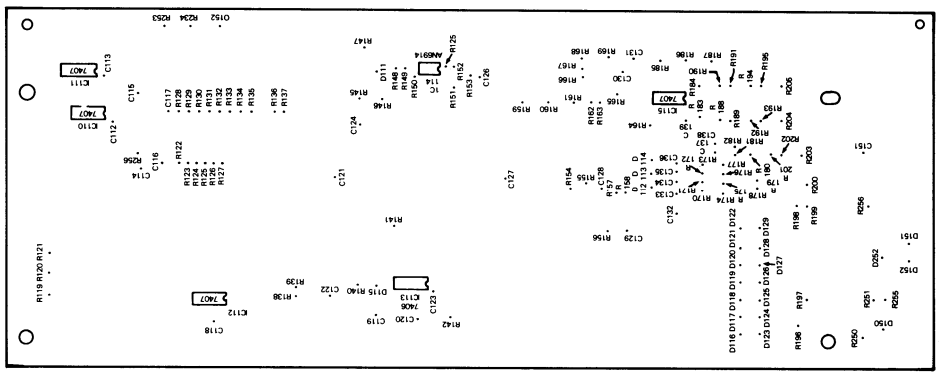

15. INTERFACE BOARD TYPE C

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
1	IC109	1407 1334	IC - UPD781O	1
2	IC104	1407 1016	IC - UPD8255AC-5	1
3	IC103	1407 1806	IC - MSM81C55RS	1
4	IC107	1407 1026	IC - SN74LS373N	1
5	IC11O - 112, 115	1407 1610	IC - SN7407NS	4
6	IC113	1407 1305	IC - SN7406NS	1
7	IC116	1407 0604	IC - TC4049BP	1
8	IC105	1401 0332	Transistor - TD62083AP	1
9	IC101,1O2,108	1407 1348	IC - TD62304P	3
10	IC114	1408 0456	IC - AN6914S	1
11	Q103	1400 0208	Transistor - 2SC945	1
12	Q102, 104 - 111	1400 0347	Transistor - 2SB101O	9
13	Q101	1400 0352	Transistor - 2SD1198A	1
14	Q120	1400 0135	Transistor - 2SA1015 - Y	1
15	Q121	1400 0072	Transistor - 2SC372Y	2
16	D101 - 110	1401 0815	Diode - 1S1588	10
17	D111 - 129, 150	1402 0476	Diode - 1SS184	20
18	ZD101	1402 0524	Zener Diode - 4.6V, 400MW	1
19	ZD102	1401 0769	Zener Diode - RD3, 6EB	1
20	IC106	1104 0271	LSI Socket - 28P	1
21	OSC101	1503 0070	Ceramic Oscillator - 10MHz	1
22	C110,111	1606 1184	Capacitor - 27PF 50V	2
23	C150	1604 1563	Capacitor - 68MF 10V	1
24	C104	1604 1357	Capacitor - 470MF, 10V	1
25	C109	1604 1363	Capacitor - 10UF 25V	1
26	C107	1604 1378	Capacitor - 1MF 50V	1
27	C103	1604 1386	Capacitor - 100MF 50V	1
28	C112 - 120 121 - 139,152	1606 1452	Capacitor - O.O1UF 50V	29
29	R11O - 118	1601 1810	Resistor - 380 OHM ±5%	8
30	R109	1622 1001	Resistor - 1K OHM 1/4T ±1%	1
31	R11O	1622 4702	Resistor - 47.2K OHM 1/4W ±1%	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
32	R101 - 108	1611 4181	Resistor - 180 OHM 1/4T	8
33	R146,188,190, 192,194,201, 203 - 205, 250,251	1610 0053	Resistor - 1K OHM 1/8W ±5%	11
34	R150	1610 0056	Resistor - 1.3K OHM 1/8W ±5%	1
35	R180,183,184, 189,191,193, 195,202	1610 0061	Resistor - 2.2K OHM 1/8W ±5%	8
36	R174 - 179	1610 0065	Resistor - 3.3K OHM 1/8W ±5%	6
37	R122,138,142, 147,153,154, 157 - 163,165, 253,255 - 257	1610 0067	Resistor - 4.7K OHM 1/8W ±5%	18
38	R119 - 121, 123 - 137, 141,148,152	1610 0071	Resistor - 10K OHM ±5%	21
39	R140,186, 196 - 200	1610 0073	Resistor - 12K OHM 1/8W ±5%	7
40	R139,151,155, 156,166,167, 181,182,183, 187,170-173, 254	1610 0079	Resistor - 22K OHM 1/8W ±5%	15
41	R145	1610 0084	Resistor - 39K OHM 1/8W ±5%	1
42	R149,164,168, 169	1610 0107	Resistor - 111 OHM 1/8W ±5%	4
43	R252	1610 0035	Resistor - 100 OHM 1/8W ±5%	1
44	RAY101 - 107	1601 7150	Resistor Array - 12K OHM ±5%	7
45	CN101	1103 0778	Connector - 2P	1
46	CN104	1102 2307	Connector - 20P	1
47	CN102	1103 1770	Wafer - 4P	1
48	CN103,1O6	1103 1773	Pin Header - 7P	2
49	CN105	1103 1775	Pin Header - 9P	1
50	CN114	1103 1776	Pin Header - 10P	1
51	CN107	1103 1778	Pin Header - 12P	1
52	CN108	1103 1781	Pin Header - 15P (Brown)	1
53	CN109	1103 1795	Pin Header - 15P (Red)	1
54	TP101,1O2	1101 0328	Connector Pin Contact	2

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55	DPS101	1204 1418	DIP Switch	1
56	IC106	5932 5103	P ROM - Main Control	1
57	JP103, 1O4, 105	1002 0133W	Jumper Wire	1

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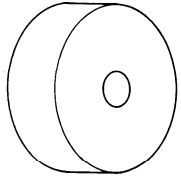

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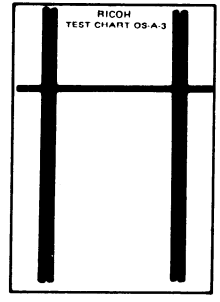

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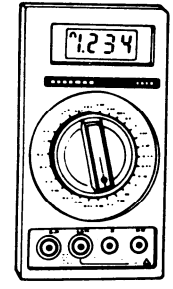

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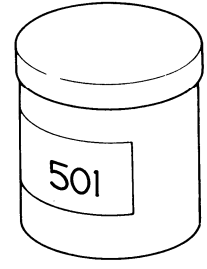

16. SPECIAL TOOL

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SORTER CS1040

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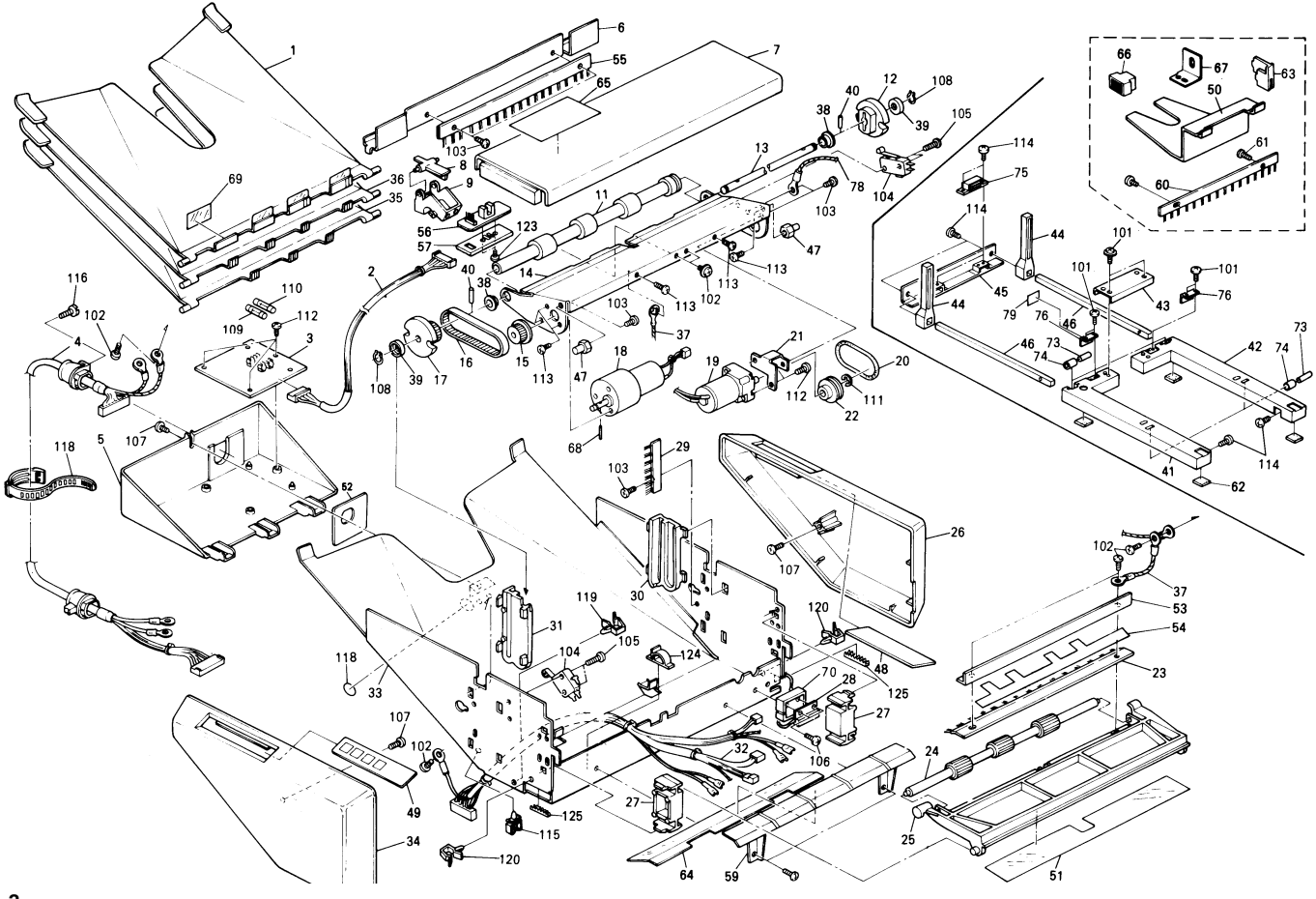
1. SORTER

October 1,'85



1. SORTER

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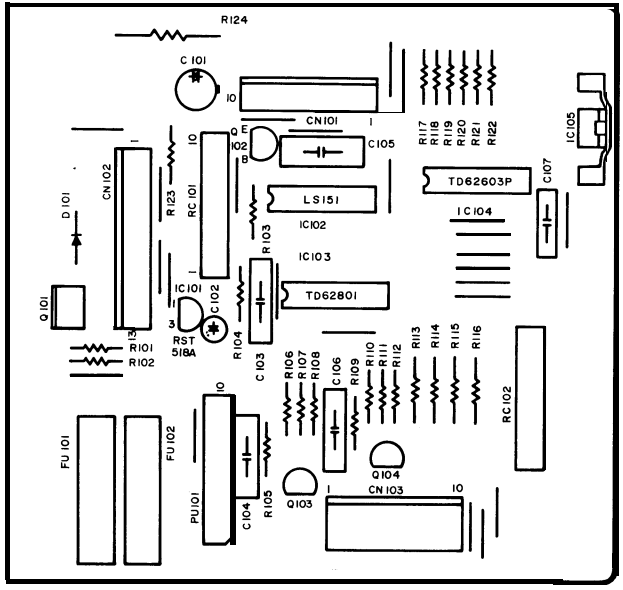
1	6801 3011	Sorter Bin - Top	1
2	6801 5620	Operation Harness - 115V	1
	6801 5640	Operation Harness - 220V	1
3	6801 5510	Sorter Main Board	1
4	6801 5610	Interface Harness	1
5	6801 6161	Lower Cover - RIC, NSA	1
6	6801 6211	Top Stay	1
7	6801 6101	Top Cover - RIC, NASHUA	1
8	6802 2357	Exit Sensor Feeler	1
9	6802 2355	Exit Sensor Bracket	1
11	6801 2123	Lower Exit Roller	1
12	6802 2237	Transfer Wheel - B	1
13	6802 2213	Bin Drive Shaft	1
14	6801 2113	Lower Guide Plate	1
15	6802 2313	Timing Pulley - 12T	1
16	6802 2317	Timing Belt - 80XL	1
17	6802 2233	Transfer Wheel - A	1
18	6802 5406	Bin Drive Motor	1
19	6803 5410	DC Motor - 24V 2.9W	1
20	6801 2322	Belt - M3 x 175	1
21	6801 2331	Bracket - Roller Drive Motor	1
22	6801 2335	Roller Drive Pulley	1
23	6802 2031	Antistatic Brush - Feed Out	1
24	6801 2021	Upper Exit Roller	1
25	6802 2015	Upper Guide Plate	1
26	6801 6141	Rear Cover - RIC, NSA	1
27	6802 1025	Up-Down Plate Guide	2
28	6802 5640	Reed Switch	1
29	6802 3161	Antistatic Brush - Bin	1
30	6802 1023	Rear Slot Liner	1
31	6802 1021	Feed Out Roller - Driven	1
32	6801 5600	Sorter Main Harness - 115V	1
	6801 5630	Sorter Main Harness - 220V	1
33	6801 1010	Sorter Frame	1
34	6801 6121	Front Cover - RIC, NSA	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
35	6803 3111	Sorter Bin - Odd	4
36	6803 3151	Sorter Bin - Even	4
37	6802 5703	Grounding Wire	1
38	6802 2215	Bushing	2
39	6802 2239	Slot Roller	2
40	6802 2217	Parallel Key	2
41	6801 7111	Front Mounting Base	1
42	6801 7121	Rear Mounting Base	1
43	6801 7131	Base Plate Bracket	1
44	6801 7141	Base Plate Stay	2
45	6801 7151	Base Plate Angle	1
46	6802 7021	Sliding Bar	2
47	6802 2117	Shaft - Lower Guide Plate	2
48	6801 6181	Side Cover - RIC, NSA	1
49	6801 5410	Operation Panel - RIC (220V)	1
	6801 5420	Operation Panel - RIC (115V)	1
50	6801 7211	Proof Tray	1
51	6802 2035	Upper Reinforcement Guide	1
52	6802 5961	Strain Relief Plate	1
53	6802 2032	Antistatic Brush Angle	1
54	6801 2032	Upper Guide Plate Mylar	1
55	6769 2272	Antistatic Brush	1
56	6801 5520	Exit Sensor Board	1
57	6801 5911	Insulating Sheet - Exit Sensor	1
59	6801 2511	Lower Guide Support Plate	1
60	6801 7531	Antistatic Brush - Copier Exit	1
61	6801 7532	Shoulder Screw - M3	1
62	6801 7123	Mounting Base Cushion	4
63	6802 7131	Mounting Lock	2
64	6801 2514	Support Plate Mylar	1
65	6801 7802	Sorter Misfeed Decal	1
66	6801 7510	Reed Switch Magnet	1
67	6801 7521	Bracket - Interface Harness	1
68	6802 2315	Drive Pulley Shaft	1
69	6801 3145	Paper Stopper	4

Index No.	Parts No.	Description	Q'ty Per Ass'y
70	6802 5951	Mount - Interlock Sensor	1
71	6801 3145	Paper Stopper	1
73	6802 7069	Base Roller Shaft	4
74	6802 7070	Base Roller	4
75	6802 7125	Magnet - Sorter Mounting Base	2
76	6802 7023	Magnet Catch Angle	2
78	6802 5723	Grounding Wire	2
*	6801 6517	CS104O Installation Procedure - Eng	1
*	6801 6527	CS104O Installation Procedure - Mu1	1
79	6801 1765	Magnet Catch Mylar	1
101	0965 4006W	Tapping Screw - M4 x 6	1
102	0965 4008W	Tapping Screw with Flat Washer - M4 x 8	8
103	0434 0060W	Tapping Screw - M4 x 6	4
104	1204 1376	Microswitch	2
105	0313 0140W	Philips Pan Head Screw - M3 x 14	4
106	0314 0140W	Philips Pan Head Screw - M4 x 14	2
107	0354 0080D	Philips Trus Head Screw - M4 x 8	1
108	0727 0060E	Retaining Ring - M4	2
109	1107 0406	Fuse - 250V, 0.5A	1
110	1107 0409	Fuse - 1A	1
111	0720 0040E	Retaining Ring - M4	1
112	0314 0060W	Philips Pan Head Screw - M4 x 6	2
113	0313 0050W	Philips Pan Head Screw - M3 x 5	6
114	0314 0080W	Philips Pan Head Screw - M4 x 8	8
115	1105 0108	Nylon Clip	2
116	0315 0080M	Philips Pan Head Screw - M5 x 8	1
117	0313 0100W	Philips Pan Head Screw - M3 x 10	2
118	2803 0006	Cord Binder	1

Index No.	Parts No.	Description	Q' ty Per Ass'y
119	1005 0335	Earth Mark	1
120	1105 0087	Clamp	2
121	0965 3010W	Tapping Screw with Flat Washer - M3 x 10	2
122	1105 0042	TY - Wrap	20
123	0965 3008W	Tapping Screw with Flat Washer - M3x8	2
124	1105 0024	Cord Clamp DK-07F	1
125	1106 0180	Snap Bushing - 3.3 mm	


R124
C101
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CN101
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R117
R118
R119
R120
R121
R122
IC105
C105
TD62603P
C107
LS151
IC102
IC104
R103
IC103
TD62801
IC101
C102
RST
518A
R104
C103
R101
R102
R106
R107
R108
C106
R109
R110
R111
R112
R113
R114
R115
R116
RC102
FU101
FU102
PU101
C104
R105
Q103
Q104
CN103
D101
Q101
CN102
R123
RC101
Q102

2. SORTER MAIN BOARD

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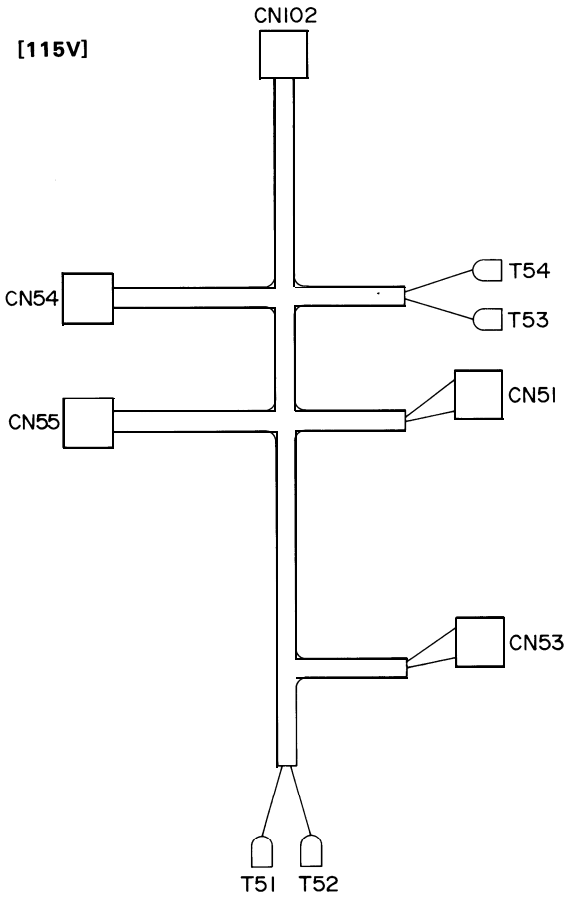
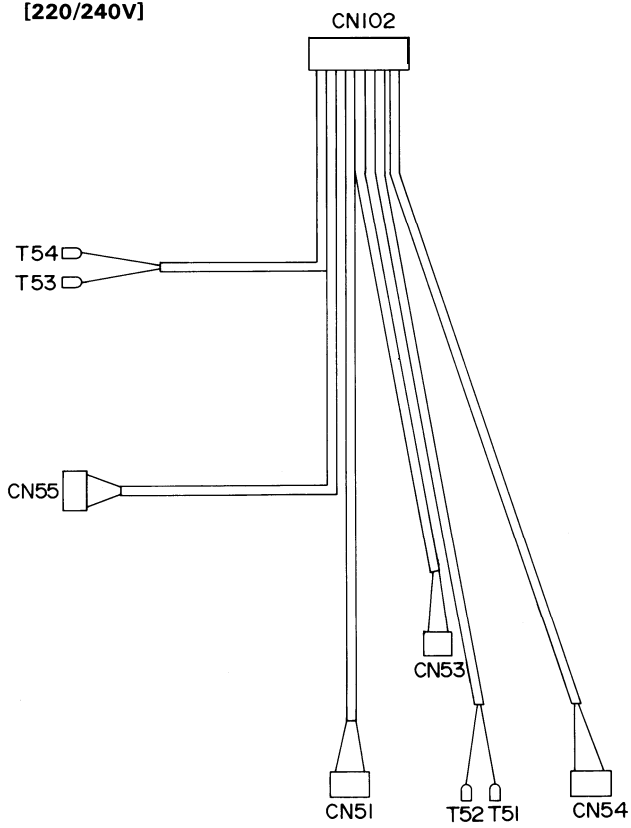
*		6801 5510	Main Board	1
1	IC101	1408 0408	Ic - PST518A	1
2	IC102	1407 1807	IC - TC40H151P	1
3	IC103	1407 1698	IC - TD62801P	1
4	IC104	1407 1607	IC - TD62603P	1
5	Q101	1400 0212	Transistor - 2SB605	1
6	Q102	1400 0072	Transistor - 2SC372Y	1
7	Q103,104	1400 0135	Transistor - 2SA1015-Y	2
8	PU101	1401 0325	Transistor - PU4320	1
9	D101	1401 0832	Diode - DSA1A1	1
10	R123	1611 4121	Resistor - 120 OHM	1
11	R101,104, 117 - 122	1611 4102	Resistor - 1K OHM 1/4T ±5%	8
12	R105, 109	1611 4222	Resistor - 2.2K OHM 1/4T ±5%	2
13	R106 - 108, 110 - 112	1611 4472	Resistor - 4.7K OHM 1/4T ±5%	6
14	R113 - 116	1611 6222	Resistor - 2.2K OHM 1/2T ±5%	4
15	R103	1611 4153	Resistor - 15K OHM 1/4T	1
16	C101	1604 1488	Capacitor - 35V, 47MF	1
17	C102	1604 1382	Capacitor - 10UF 50V	1
18	C103 - 107	1606 1109	Capacitor - 50V, 0.1MF	5
19	RC101,102	1602 0911	RC Array - RC082	2
20	FU101	1107 0406	Fuse - 250V 0.5A	1
		1104 0307	Fuse Clip	2
21	FU102	1107 0409	Fuse - 1A	1
21		1104 0307	Fuse Clip	2
22	CN101	1103 1732	Connector - 10P	1
23	CN102	1103 1735	Connector - 13P	1
24	CN103	1103 1690	Connector - 10P	1
25	JP	1002 0307	Jumper Wire	
26	IC105	1404 0306	Resistor - 47K OHM 1/4W ±5%	1
27	R124	1600 0510	Resistor - 15 OHM ±5%	1
28	IC105	1005 0799	Heat Sink - HO-220	1
29	R102	1611 4473	Resistor - 47K OHM 1/4T ±5%	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly

[115V]



[220/240V]



3. MAIN HARNESS

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*		6801 5600	Sorter Main Harness - 115V	1
		6801 5630	Sorter Main Harness-220/240	1
1	CN102	1102 1921	Connector - 13P	1
		1100 1327	Contact	13
2	CN54	1102 0415	Connector Housing	1
		1100 0861	Socket Terminal - Large	2
3	CN55	6802 5817	Connector - 5P	1
		6802 5823	Key - PK/00C	1
4	CN51,53	1102 1964	Connector - 2P	2
		1100 1328	Contact	4
5	T1,2,5,6	1100 0298	Solid Strand	4

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RICOH

RICOH FT2070

PARTS CATALOG

1st edition Feb. 1986

RICOH COMPANY LTD.

PARTS CATALOG

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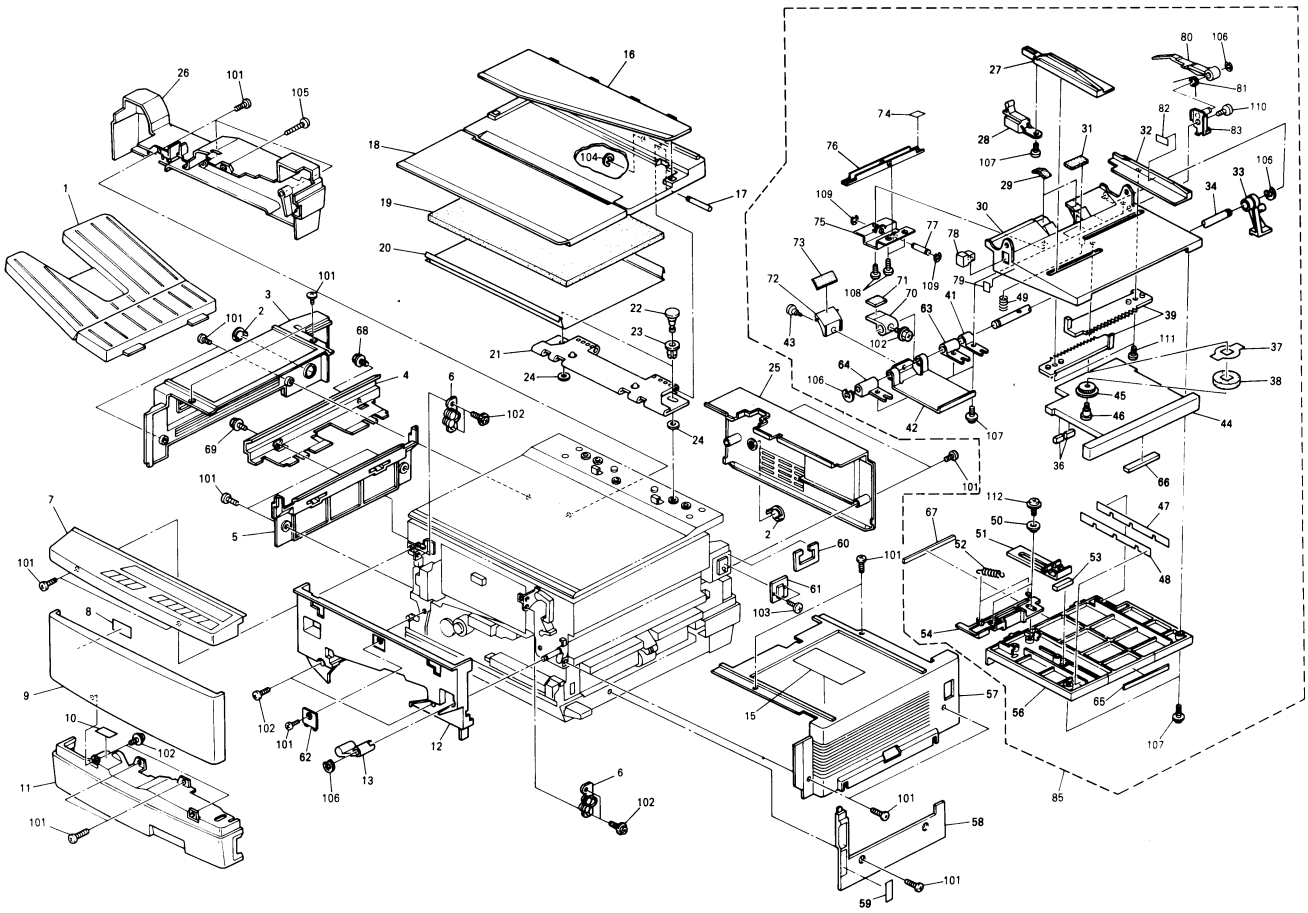
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1. EXTERIOR

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1	5216 4249	Copy Tray	1
2	5216 1262	Sortor Harness Cap	2
3	5220 1260	Upper Left Cover - 220/240V, ROC	1
	5220 1317	Upper Left Cover - USA	1
4	5216 4195	Exit Cover	1
5	5216 1286	Lower Left Cover - 220/240V, ROC	1
	5216 1330	Lower Left Cover - USA	1
6	5409 1238	Rotary Catch	2
7	5220 5512	Operation Panel Ass'y - USA	1
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8	5220 4880	Instruction Decal 2	1
9	5220 1199	Front Cover	1
10	5216 1279	Misfeed Removal Decal	1
11	5216 1275	Lower Front Cover - 220/240V, ROC	1
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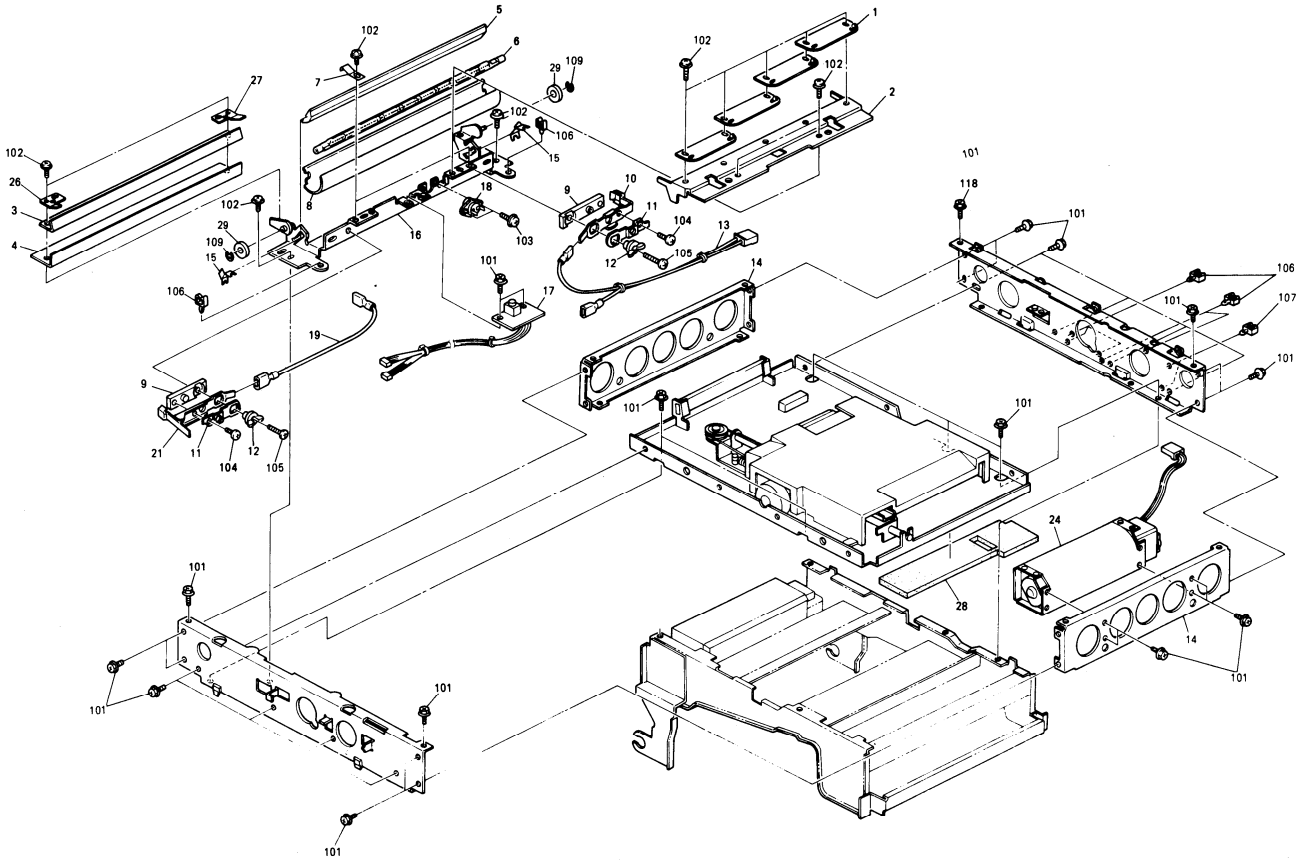
12	5220 1271	Inner Cover	1
13	5216 1091	Release Lever - Top Unit	1
15	5220 4867	Instruction Decal 1 - USA	1
	5220 4873	Instruction Decal 1 - 220/240V, ROC	1
	5220 4874	French Instruction Decal 1	1
	5220 4875	German Instruction Decal 1	1
	5220 4876	Italian Instruction Decal 1	1
	5220 4877	Spanish Instruction Decal 1	1
16	5216 1365	Original Holder	1
17	5216 1374	Hinge Shaft - Platen Cover	1
18	5216 1361	Platen Cover	1
19	5216 1366	Platen Cover Pad	1
20	5216 1367	Platen Cover Sheet	1
21	5216 1371	Platen Cover Hinge	1
22	5216 1373	Ratch - Plunger	2
23	5216 1372	Ratch - Grommet	2
24	5203 1359	Platen Cover Washer	2
25	5220 1255	Upper Rear Cover - ROC, Saudi	1
	5220 1313	Upper Rear Cover - USA	1
	5220 1455	Upper Rear Cover - 220/240V	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
26	5220 1281	Lower Rear Cover - 220/240V, ROC	1
	5220 1327	Lower Rear Cover - USA	1
27	5220 2647	Left Fence - Paper Tray	1
28	5220 2648	Arm - Paper Size Detection	1
29	5220 2640	Side Pad - Paper Tray	2
30	5220 2643	Paper Tray Table	1
31	5201 1258	Shielding Plate-upper Front Cover	1
32	5220 2650	Right Fence - Paper Tray	1
33	5220 2703	Center Fence Arm	1
34	AA14 0032	Center Fence Shaft	1
36	AA02 0001	Drawer Tray Magnet	2
37	5203 2678	Paper Tray Spring	1
38	5203 2677	Friction Disc	1
39	5216 2753	Manual Feed Guide Rack	2
41	AA08 0006	Fence Bushing	1
42	5220 2639	Friction Pad Lever	1
43	5447 2769	Stepped Screw	1
44	5220 2665	Drawer Tray - ROC	1
	5220 2666	Drawer Tray - USA	1
	5220 2667	Drawer Tray - 220/240V	1
45	5203 2675	Paper Tray Pinion	1
46	5203 2679	Pinion Tightening Screw - M4 x 5	1
47	AA16 2004	Rear Dumper - Paper Tray	1
48	AA16 2003	Front Dumper - Paper Tray	1
49	AA06 3010	Pad Spring	1
50	5216 2830	Friction Pad Spacer	2
51	5220 2625	Slide Lever - Paper Length - USA, ROC	1
	5220 2681	Slide Lever - Paper Length - 220/240V	1
52	AA06 0024	Lever Spring - Paper Length	2
53	AA02 1001	Slide Lever Magnet	1
54	5220 2629	Lever - Paper Length Detection	1
56	5220 2656	Lower Cover - Paper Tray	1
57	5220 1266	Upper Right Cover - 220/240V, ROC	1
	5220 1321	Upper Right Cover - USA	1
58	5220 1291	Lower Right Cover	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
59	5216 1293	Lock Release Decal - USA	1
	5216 1295	Lock Release Decal - 220/240V, ROC	1
60	5420 1515	Plate - Key Counter	1
61	5216 1303	Key Counter Cover	1
62	5220 1272	DIP Switch Cover	1
63	AA08 0007	Right Bushing - Friction Pad Bracket	1
64	AA08 0008	Left Bushing - Friction Pad Bracket	1
65	5220 2634	Magnet Fixing Plate - Lower Cover	1
66	AA02 1003	Drawer Tray Magnet	1
67	AA02 1002	Paper Tray Magnet	1
68	5216 4220	Screw - M3	1
69	5216 4221	Shoulder Screw - M3	1
70	5220 2632	Gear - 50T	1
71	5220 2641	Center Pad - Paper Paper	1
72	5220 2637	Friction Pad Holder	1
73	5220 2638	Friction Pad	1
74	5220 2693	Cushion - Pressure Release Lever	1
75	5220 2691	Bracket - Friction Pressure Release	1
76	5220 2692	Lever - Friction Pressure Release	1
77	5220 2690	Shaft - Friction Pressure Release	1
78	5220 2696	OHP Transparency Lever	1
79	5220 2699	Decal - OHP Transparency Lever	1
80	5220 2702	Center Fence Lever	1
81	5220 2701	Spring - Center Fence Lever	1
82	5203 2694	Load Indicator Decal	1
83	5220 2704	Bracket - Center Fence Lever	1
84	5220 2636	Friction Mylar	1
85	5220 2671	Paper Tray Ass'y - ROC	1
	5220 2672	Paper Tray Ass'y - USA	1
	5220 2673	Paper Tray Ass'y - 220/240V	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
101	0353 0060F	Philips Truss Head Screw - M3 x 6	22
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	9
103	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	2
104	0720 0025E	Retaining Ring - M2.5	2
105	0313 0100E	Philips Pan Head Screw - M3 x 10	1
106	0720 0040E	Retaining Ring - M4	4
107	0965 4006W	Tapping Screw - M4 x 6	6
108	0444 0082W	Hexagon Head Tapping Screw - M4 x 8	3
109	0720 0030E	Retaining Ring - M3	2
110	0443 0082W	Hexagon Head Tapping Screw - M3 x 8	1
111	0802 5019	Tapping Round Head Screw - M4 x 10	2
112	0802 5089	Tapping Screw - M3 x 8	2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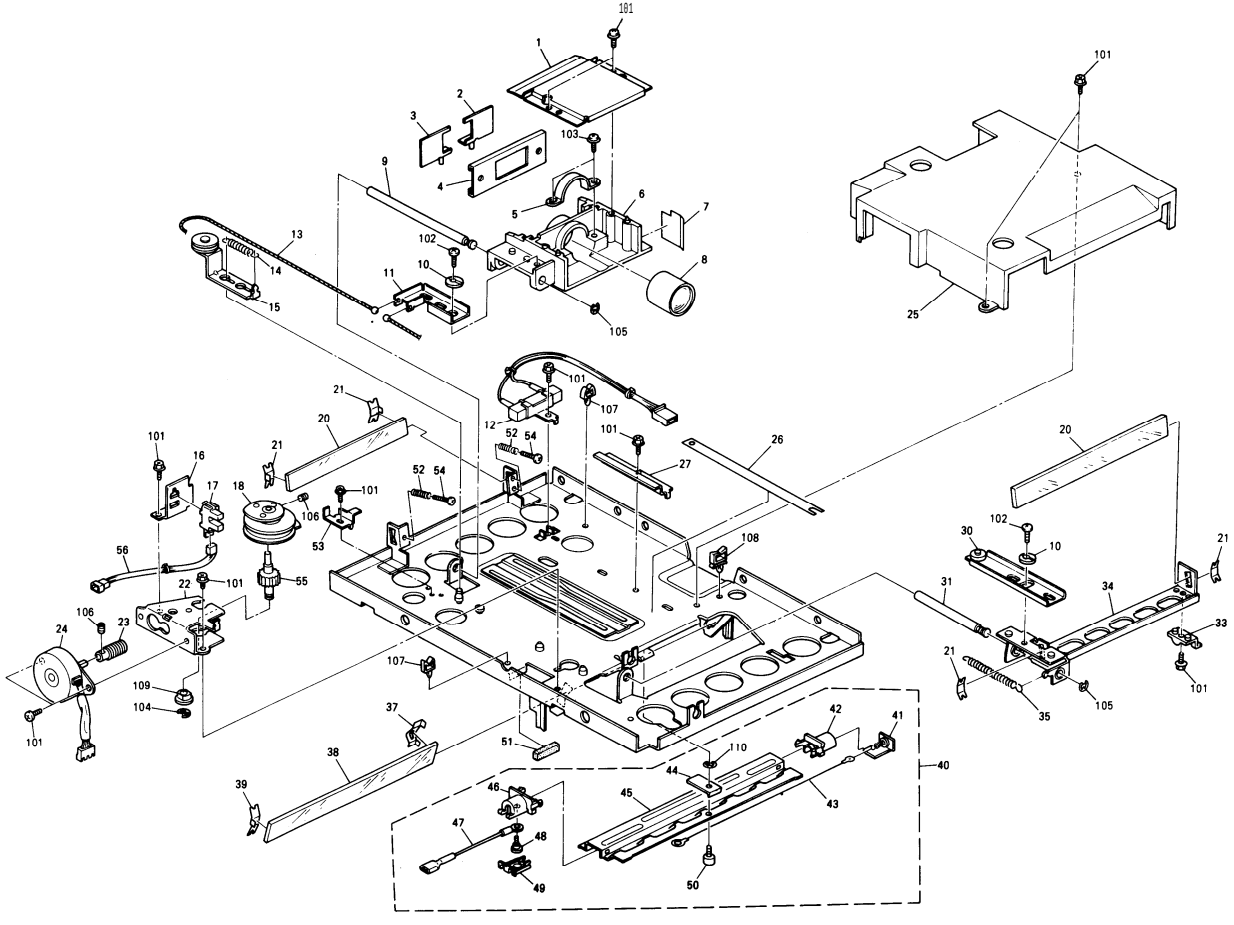
2. EXPOSURE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5220 1787	Lamp Shielding Plate	4
2	5220 1786	Main Reflector Cover	1
3	5220 1784	Support Reflector	1
4	5220 1783	Slit Plate	1
5	AC03 0005	1st Mirror	1
6	AX52 0002	Exposure Lamp - 115V	1
	AX52 0003	Exposure Lamp - 220/240v	1
7	5220 1781	Reflector Clamp	1
8	5220 1780	Main Reflector	1
9	5420 1675	Insulator - Lamp Terminal	1
10	5442 1700	Front Terminal - Exposure Lamp	1
11	5420 1682	Supporter - Lamp Terminal	2
12	5420 1676	Spacer - Lamp Terminal	2
13	5220 5363	Rear Harness - Exposure Lamp	1
14	5220 1802	Optics Unit Stay	2
15	5220 1777	Spring Plate	2
16	5220 1771	1st Mirror Bracket	1
17	5220 5220	Auto ID Sensor Board	1
18	AW11 0001	Thermoswitch - 70°C	1
19	5220 5362	Front Harness - Exposure Lamp	1
21	5442 1705	Rear Terminal - Exposure Lamp	1
24	AX02 0017	Cooling Fan Motor - 115V	1
	AX02 0018	Cooling Fan Motor - 220/240V	1
26	5220 1788	Left Reflector	1
27	5220 1789	Right Reflector	1
28	AA15 1003	Seal - Lens Base Plate	1
29	AA13 2011	Slider Guide Roller	2

Index No.	Parts No.	Description	Q' ty Per Ass'y
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	32
102	0951 3005W	Philips Screw with Flat Washer - M3 x 5	13
103	0313 0040W	Philips Pan Head Screw - M3 x 4	2
104	0313 0080W	Philips Pan Head Screw - M3 x 8	2
105	0313 0120W	Philips Pan Head Screw - M3 x 12	2
106	1105 0199	Clamp	5
107	1105 0199	Clamp	2
108	1105 0196	Harness Clamp	1
109	0720 0040E	Retaining Ring - M4	2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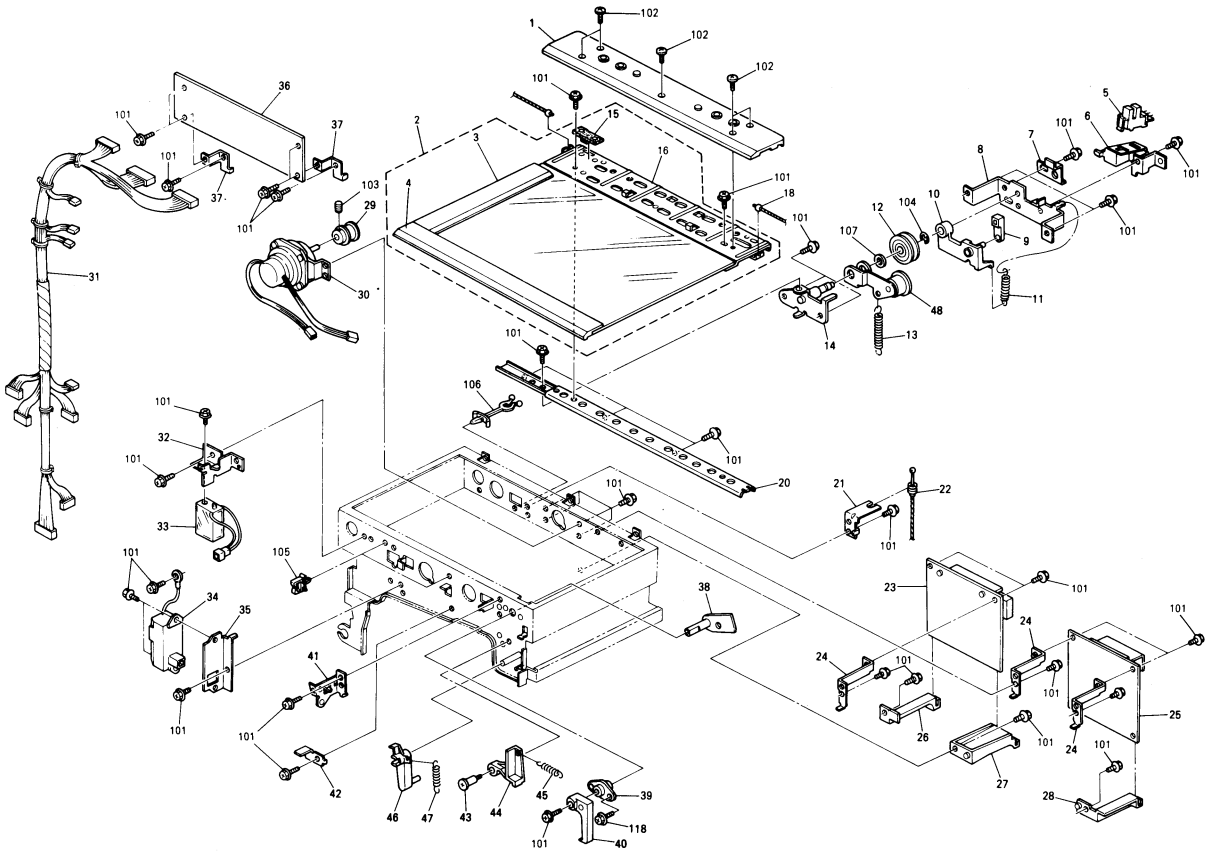
3. LENS SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5220 1691	Lens Shield Plate	1
2	5205 1794	Left Shield	1
3	5205 1797	Right Shield	1
4	5205 1793	Shielding - Guide	1
5	5211 1750	Lens Holder	1
6	5220 1681	Lens Housing	1
7	AA15 2003	Lens Housing Seal	1
8	AC02 0005	Lens - F8	1
9	AA14 0028	Guide Rod - Lens Drive	1
10	5220 1688	Eccentric Cam	2
11	5220 1687	Clamp Plate - Lens Drive Wire	1
12	5220 5536	Anticondensation Heater - 115V	1
	5220 5636	Anticondensation Heater - 220/240V	1
13	AA05 0004	Lens Drive Wire	1
14	AA06 0018	Spring - Lens Drive Wire	1
15	5220 1720	Tightner Pulley - Lens Drive Wire	1
16	5220 1716	Sensor Bracket	1
17	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
18	5220 1710	Lens Drive Pulley	1
20	AC03 0006	3rd Mirror	2
21	5220 1733	Spring Plate	4
22	5220 1701	Bracket - Lens Drive Motor	1
23	5215 1956	Worm Gear	1
24	AX02 0009	Stepper Motor	1
25	5220 1761	Lens Cover	1
26	5205 1823	Lens Support Plate Mylar	1
27	5220 1695	Lens Bracket Stopper	1
30	5220 1746	Cam Bracket	1
31	AA14 0029	Guide Rod - Mirror Drive	1
33	5220 1745	3rd Mirror Guide	1
34	5220 1741	3rd Mirror Bracket	1
35	AA06 0017	3rd Mirror Tension Spring	1
37	5442 1741	Rear Spring Plate - 2nd and 3rd Mirror	1
38	AC03 0007	4th Mirror	1
39	52201676	Front Spring Plate	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
40	5220 2051	Charge Corona Ass'y	1
41	5203 2059	Corona Wire Hook	1
42	5203 2058	Front End Block - Charge	1
43	5216 9001	Corona Wire - 10 pcs/Set	1
44	5203 2062	Charge Corona Holder	1
45	5216 2055	Charge Corona Casing	1
46	5203 2057	Rear End Block - Charge	1
47	AZ43 0001	High Voltage Supply Cable	1
48	5203 2060	Corona Wire Screw - M3 x 4	1
49	5203 2061	Rear End Cover - Charge	1
50	5214 2080	Thumb Screw - M4 x 5	1
51	AA15 1001	Seal - 5 x 29 mm	1
52	AA06 3012	Second Mirror Spring	3
53	5220 1724	Tension Pulley Stopper	1
54	AA14 3019	Mirror Adjusting Screw	3
55	5220 1702	Gear - Lens Drive Pulley	1
56	5220 5356	Harness - Lens Home Position Sensor	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	10
102	0313 0080W	Philips Pan Head Screw - M3 x 8	2
103	0951 4006W	Philips Screw with Flat Washer - M4 x 6	2
104	0720 0060E	Retaining Ring - M6	1
105	0720 0050E	Retaining Ring - M5	2
106	0574 0050E	Hexagon Headless Set Screw - M4 x 5	1
107	1105 0199	Cl amp	2
108	1105 0196	Harness Clamp	1
109	0805 3386	Bushing - 8MM	1
110	0720 0030E	Retaining Ring - M3	1

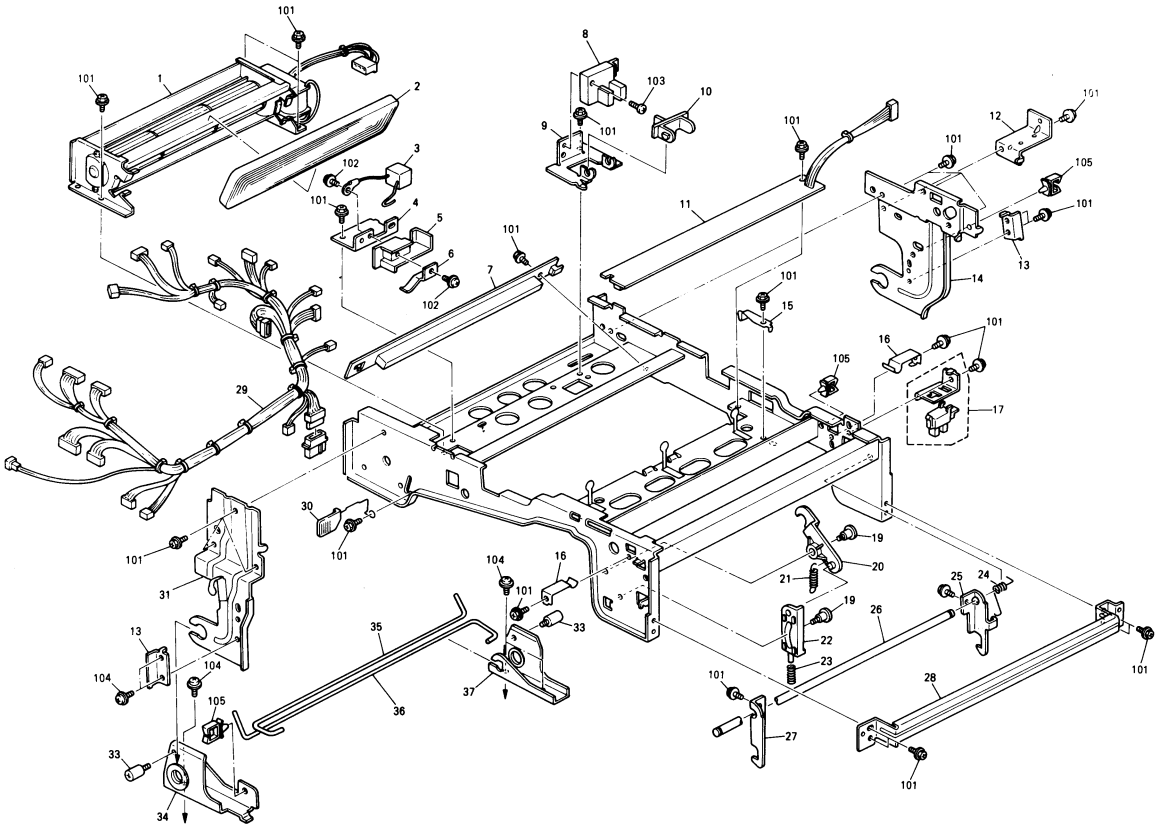
4. SLIDER DRIVE SECTION



4. SLIDER DRIVE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5220 1922	Slider Cover	1
2	5220 1901	Exposure Glass - USA	1
	5220 1902	Exposure Glass - 220/240V	1
	5220 1903	Exposure Glass - ROC	1
3	AC04 1003	Left Original Scale - USA	1
	AC04 1004	Left Original Scale - 220/240V	1
	AC04 1005	Left Original Scale - ROC	1
4	AC04 1007	Front Original Scale - ROC	1
	AC04 1008	Front Original Scale - USA	1
	AC04 1009	Front Original Scale - 220/240V	1
5	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
6	5220 1836	Home Position Sensor Bracket	1
7	5220 1921	Slider Lock Bracket	1
8	5220 1830	Slider Stopper Bracket	1
9	5220 1832	Slider Lock Lever	1
10	5220 1831	Slider Lock Arm	1
11	AA06 0023	Slider Lock Spring	1
12	5209 1735	Pulley	1
13	AA06 0046	Tightner Spring	1
14	5220 1821	Slider Pulley Bracket	1
15	5220 1915	Actuator Rubber	1
16	5220 1911	Slider Angle	1
18	AA05 0005	Slider Drive Wire	1
20	5220 1917	Slide Rail	1
21	5220 1833	Drive Wire Angle	1
22	AA05 1001	Slider Lock Release Wire	1
23	5220 5560	AC Drive Board - 115V	1
	5220 5660	AC Drive Board - 220/240V	1
24	5220 1816	Optics Board Bracket	3
25	5220 5120	Optics Board	1
26	5220 1083	AC Drive Board Angle	1
27	5220 1084	Left Angle - AC Drive Board	1
28	5220 1085	Right Angle - AC Drive Board	1
29	AB03 2029	Slider Drive Motor Pulley	1
30	AX02 0010	Slider Drive Motor	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
31	5220 5350	Upper Front Harness	1
32	5220 5815	Left Bracket - Operation Panel	1
33	5216 5224	Total Counter	1
34	5216 5201	Power Pack - Charge	1
35	5220 5803	Bracket - Charge Power Pack	1
36	5220 5105	Main Board	1
37	5220 1081	Main Board Angle	2
38	5220 1094	Unlock Lever	1
39	5220 1093	Lever Holder	1
40	5220 1101	Release Lock Link	1
41	5220 5816	Right Bracket - Operation Panel	1
42	5220 1082	Center Angle - Main Board	1
43	5220 1102	Shoulder Screw - M3	1
44	5220 1097	Release Lock	1
45	AA06 0022	Release Lock Spring	1
46	5216 1098	Lock Release Arm	1
47	5216 1100	Release Lever Spring	1
48	5220 1824	Wire Tightener	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	38
102	0353 0060F	Philips Truss Head Screw - M3 x 6	5
103	0574 0050E	Hexagon Headless Set Screw - M4 x 5	1
104	0720 0060E	Retaining Ring - M6	1
105	1105 0196	Harness Clamp	2
106	1105 0120	Wire Clip	2
107	0807 5044	Washer -8.1 x 11.5 x0.2mm	1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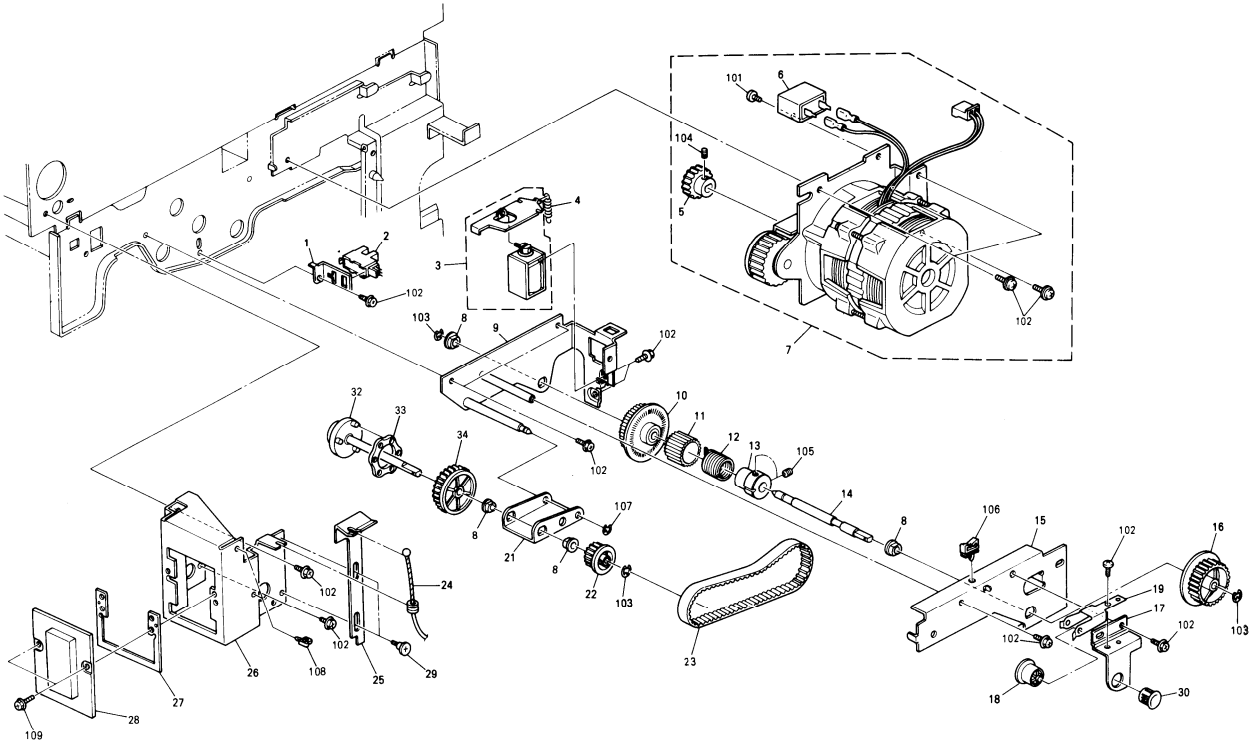
5. UPPER UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	AX02 0020	Fan Motor - 115V/60Hz	1
	AX02 0021	Cooling Fan Motor - 220V/50Hz	1
	AX02 0022	Motor - 220V/60Hz	1
2	5216 1077	Ozone Filter	1
3	5220 5209	Varistor - 900V	1
4	5216 2405	Varistor Bracket	1
5	5203 2403	Varistor Holder	1
6	5216 2404	Leaf Spring - Varistor	1
7	5216 5250	Quenching Lamp	1
8	5216 5233	Photointerruptor - IL-G-4P-S3T2-E	1
9	5216 5857	Photointerruptor Bracket	1
10	5216 2441	Shielding Plate - T.O.F.	1
11	5220 5257	Erase Lamp Unit	1
12	5220 1129	Rear Cover Angle	1
13	5220 1124	Hook - Rear Torsion Bar Spring	1
14	5220 1119	Rear Upper Hinge	1
15	5216 2422	Leaf Spring - Master Earth	1
16	5216 1073	Left Spring	2
17	5216 3170	Toner End Sensor Ass'y	1
19	5203 2679	Pinion Tightening Screw - M4 x 5	2
20	5216 2412	Pressure Arm	1
21	5216 2414	Pressure Release Spring	1
22	5216 2410	Pressure Arm Lever	1
23	5216 2413	Pressure Arm Spring	1
24	5216 1092	Lock Pawl Spring	1
25	5216 1090	Rear Lock Pawl	1
26	5216 1088	Lock Pawl Shaft	1
27	5216 1089	Front Lock Pawl	1
28	5220 1269	Support Plate - Upper Right Cover	1
29	5220 5351	Upper Rear Harness	1
30	5216 1072	Release Hook - Master Unit	1
31	5220 1115	Front Upper Hinge	1
34	5220 1112	Front Lower Hinge	1
35	5220 1122	Rear Torsion Bar Spring	1
36	5220 1121	Front Torsion Bar Spring	1
37	5220 1117	Rear Lower Hinge	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	25
102	0965 3006W	Tapping Screw with Flat Washer - M3 x 6	2
103	0313 0100W	Philips Pan Head Screw - M3 x 10	1
104	0964 4008W	Tapping Screw with Flat Washer - M4 x 8	3
105	1105 0196	Harness Clamp	3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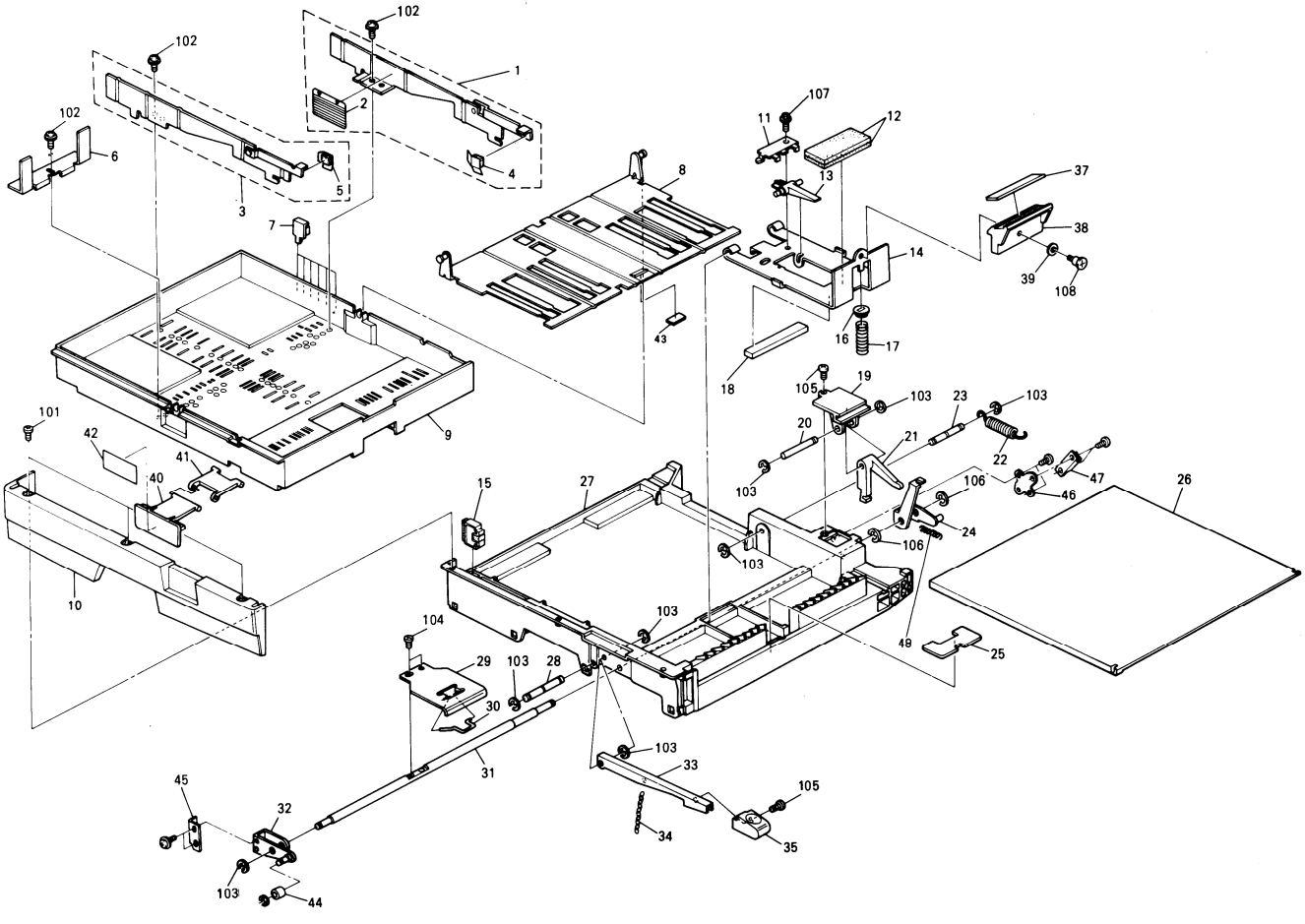
6. MAIN DRIVE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 1876	Photointerruptor Bracket	1
2	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
3	5216 1180	Master Unit Solenoid - DC24V	1
4	5216 1174	Spring - Master Unit Solenoid	1
5	5220 5870	Output Gear - 50Hz	1
	5220 5871	Output Gear - 60Hz	1
6	1606 1562	Capacitor - 4μF 250V (115V)	1
	1606 1563	Capacitor - 4μF 250V (220/240V)	1
7	AX02 0013	Motor - 115V/60Hz	1
	AX02 0014	Motor - 220V/50Hz	1
	AX02 0015	Motor - 220V/60Hz	1
8	5053 0447	Bushing - 6x10x6mm	4
9	5220 1151	Master Drive Bracket	1
10	5216 1166	Gear - 30T	1
11	5413 1175	Ratchet Sleeve - Paper Feed	1
12	5053 0465	Spring Clutch	1
13	5446 4774	Clutch - Drum	1
14	5216 1165	Drive Shaft - Master Unit	1
15	5220 1154	Support Plate - Master Drive	1
16	5216 1170	Drive Pulley - 21T	1
17	5220 1157	Drive Wire Bracket	1
18	5216 1176	Belt Tension Pulley	1
19	5216 1177	Holder - Belt Tension Pulley	1
21	5216 2267	Drive Arm - Master Unit	1
22	5216 1171	Drive Pulley - 14T	1
23	5216 1172	Timing Belt - 120XL	1
24	AW05 1001	Slider Lock Release Wire	1
25	5220 1834	Drive Wire Arm	1
26	5220 1303	Key Counter Bracket	1
27	5420 1515	Plate - Key Counter	1
28	5216 1303	Key Counter Cover - RIC, NSA	1
29	5400 3404	Stepped Screw	2
30	1106 0458	Bushing - 9.9MM	1
32	5216 2284	Master Drive Shaft	1
33	5203 1831	Rubber Dumper	1
34	5216 2287	Gear - 48T	1
101	0314 0080B	Philips Pan Head Screw - M4 x 8	1
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	10
103	0720 0040E	Retaining Ring - M4	3
104	0574 0040W	Hexagon Headless Set Screw - M4 x 4	1
105	0574 0050E	Hexagon Headless Set Screw - M4 x 5	1
106	1105 0197	Wire Saddle	1
107	0720 0030E	Retaining Ring - M3	1
108	1105 0199	clamp	1
109	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	2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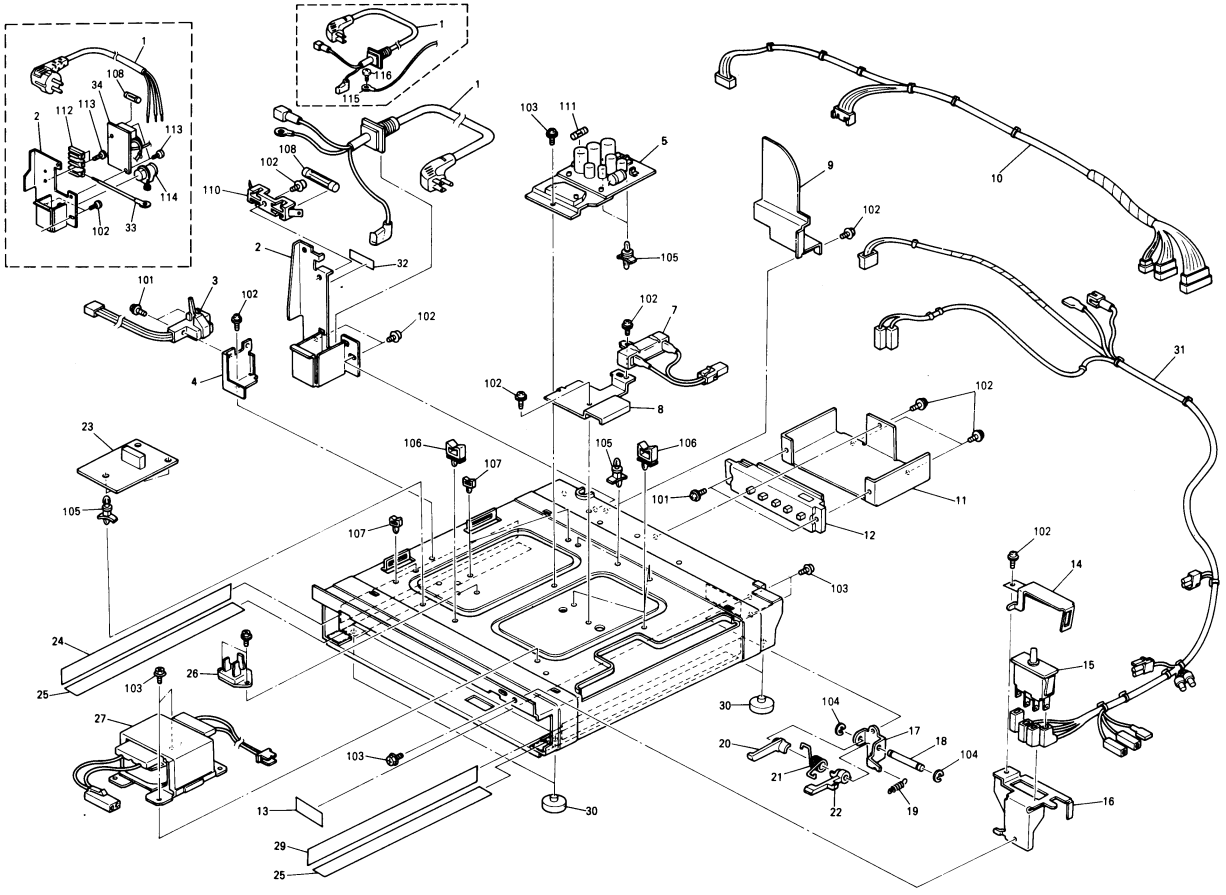
7. PAPER CASSETTE SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2763	Left Side Fence	1
2	5413 4835	Decal - Paper Level	1
3	5216 2764	Right Side Fence	1
4	5215 2720	Front Side Holder	1
5	5215 2731	Rear Side Holder	1
6	5447 2941	Rear Fence	1
7	5216 2762	Paper Size Actuator	5
8	5215 2710	Bottom Plate	1
9	5216 2770	Cassette Body	1
10	5216 2802	Cassette Tray Cover	1
11	5216 2835	Hook Lever Cover	1
12	5216 2834	Friction Bracket Pad	2
13	5216 2836	Hook Lever	1
14	5216 2817	Friction Bracket	1
15	5216 4975	Cleaner - Fiber Optics/Corona Wire	1
16	5216 2833	Pressure Spring Holder	1
17	5216 2820	Pad Pressure Spring	1
18	5216 2838	Magnet - 8x54mm	1
19	5216 2806	Lock Holder Cover	1
20	5216 2805	Lock Shaft	1
21	5216 2804	Lock Lever	1
22	5216 2807	Cassette Lift Spring	1
23	5216 2808	Lift Spring Shaft	1
24	5216 2828	Cassette Lift Bracket	1
25	5216 2845	Magnet	1
26	5216 2788	Cassette Cover	1
27	5216 2795	Cassette Tray - RIC NSA	1
28	5216 2821	Release Lever Shaft	1
29	5216 2815	Cassette Lift Arm	1
30	5216 2841	Release Hook	1
31	5216 2809	Cassette Lift Shaft	1
32	5216 2810	Lift Release Bracket	1
33	5216 2822	Pressure Lift Lever	1
34	5216 2840	Grounding Chain - 10P	1
35	5216 2824	Cassette Release Knob	1

Index No.	Parts No.	Description	Q' ty Per Ass'y
37	5216 2844	Friction Pad	1
38	5216 2818	Pad Holder	1
39	5216 2830	Friction Pad Spacer	1
40	5216 2886	Cassette Size Panel	1
41	5216 2888	Size Panel Holder - RIC, NSA	1
42	5216 2786	Cassette Size Decal	1
43	5215 2713	Bottom Plate Pad	1
44	5216 2826	Roller - Pressure Release Bracket	1
45	5216 2827	Stopper Bracket - Cassette Tray	1
46	5216 2846	Magnet Catch Bracket	1
47	5054 0536	Magnet Catch Ass'y	1
48	5208 2674	Pressure spring	1
101	0353 0060W	Philips Pan Head Bind Screw	3
102	0965 4008W	Tapping Screw with Flat Washer - M4 x 8	3
103	0720 0040E	Retaining Ring - M4	8
104	0314 0080W	Philips Pan Head Screw - M4 x 8	2
105	0353 0060W	Philips Pan Head Bind Screw	2
106	0720 0060E	Retaining Ring - M6	2
107	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	1
108	0313 0080W	Philips Pan Head Screw - M3 x 8	1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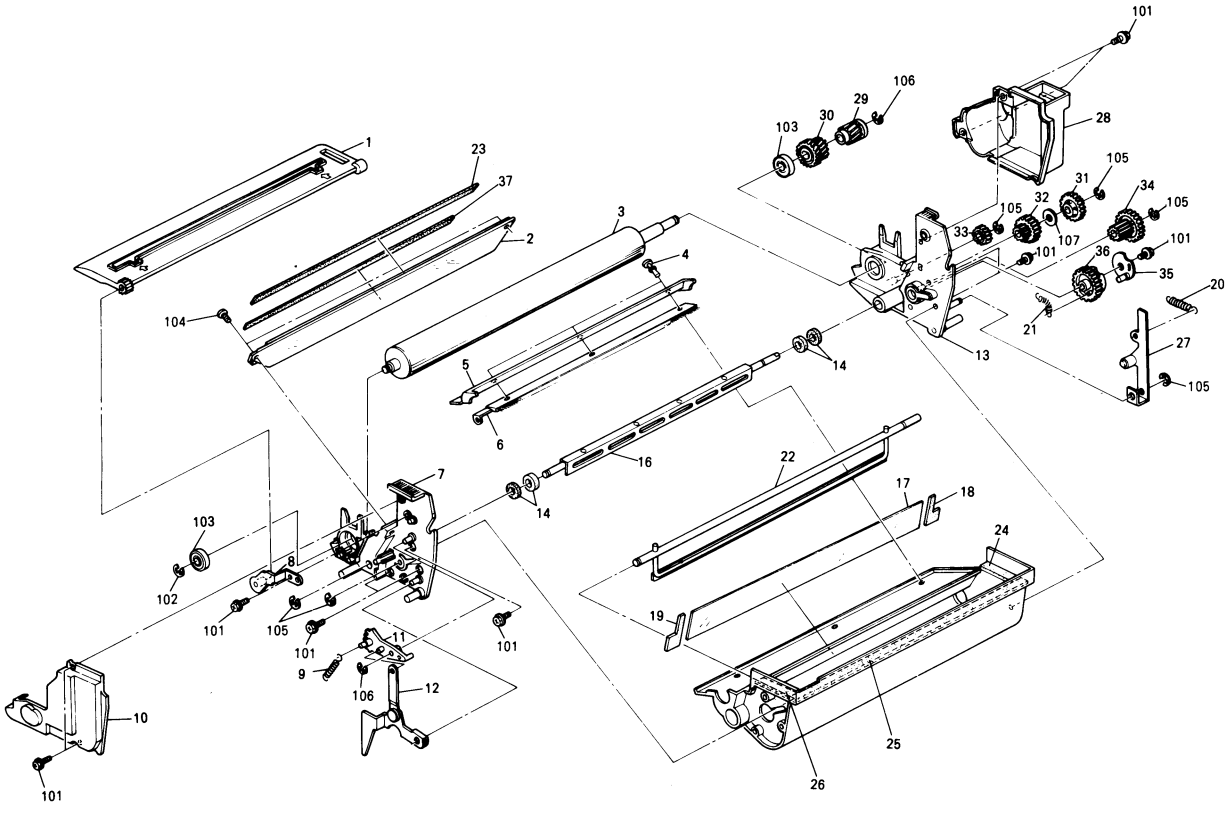
8. LOWER UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 5401	Power Supply Cord - ROC	1
	5216 5501	Power Supply Cord - 115V	1
	2801 0027	Power Supply Cord - 220/240V	1
2	5216 5850	Power Supply Cord Bracket - 115V	1
	5216 5880	Power Supply Cord Bracket - 220/240V	1
3	5216 5236	Exit Sensor	1
4	5216 4179	Exit Sensor Bracket	1
5	5220 5160	DC Power Supply Board	1
7	5203 5535	Ceramic Resistor - 115V	1
	5203 5635	Ceramic Resistor - 220/240V	1
8	5216 2695	Paper Feed Sensor Bracket	1
9	5220 5853	AC Harness Cover	1
10	5220 5352	Lower Unit Harness	1
11	5216 2862	Bracket - Paper Size Switch	1
12	5220 5226	Push Switch	1
13	5216 2850	Mylar - 40x40mm	1
14	5220 5826	Safety Switch Lever	1
15	1204 1373	Push Switch	1
16	5220 5825	Safety Switch Bracket	1
17	5216 1157	Unlock Lever Bracket	1
18	5216 2855	Unlock Lever Shaft	1
19	5216 2854	Unlock Lever Spring	1
20	5216 2852	Unlock Arm	1
21	5216 2853	Spring - Twist	1
22	5216 2851	Unlock Lever	1
23	5216 5445	Fusing Power Board Ass'y - 115V	1
	5216 5645	Fusing Power Board Ass'y - 220V	1
24	5216 2848	Cassette Tray Guide - Right	1
25	5216 2849	Cassette Tray Guide - Lower	2
26	1405 0153	Triac - TG16C40	1
27	5216 5530	Transformer - 115V	1
	5216 5630	Transformer - 220V	1
29	5216 2847	Cassette Tray Guide - Left	1
30	5216 1186	Rubber Foot	4
31	5220 5361	AC Harness	1
32	5448 4973	Decal - English	1
33	5216 5675	Grounding Wire	1
34	5220 5641	Noise Filter Board - 220/240V	1
101	0313 0100W	Philips Pan Head Screw - M3 x 10	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	7
103	0434 0080W	Tapping Screw - M4 x 8	4
104	0720 0040E	Retaining Ring - M4	2
105	1105 0193	Nylon Stud	3
106	1105 0196	Harness Clamp	2
107	1105 0199	Cl amp	2
108	1107 0485	Fuse - 15A, 125V	1
	1107 0486	Fuse - 8A, 250V	1
109	0313 0120W	Philips Pan Head Screw - M3 x 12	1
110	1104 0322	Fuse Holder - 220/240V	1
111	1107 0391	Fuse - 5A, 125V	1
112	0313 0040W	Philips Pan Head Screw - M3 x 4	1
113	0313 0060W	Philips Pan Head Screw - M3 x 6	2
114	0313 0050W	Philips Pan Head Screw - M3 x 5	1
115	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	1
116	0802 5089	Tapping Screw - M3 x 8	1

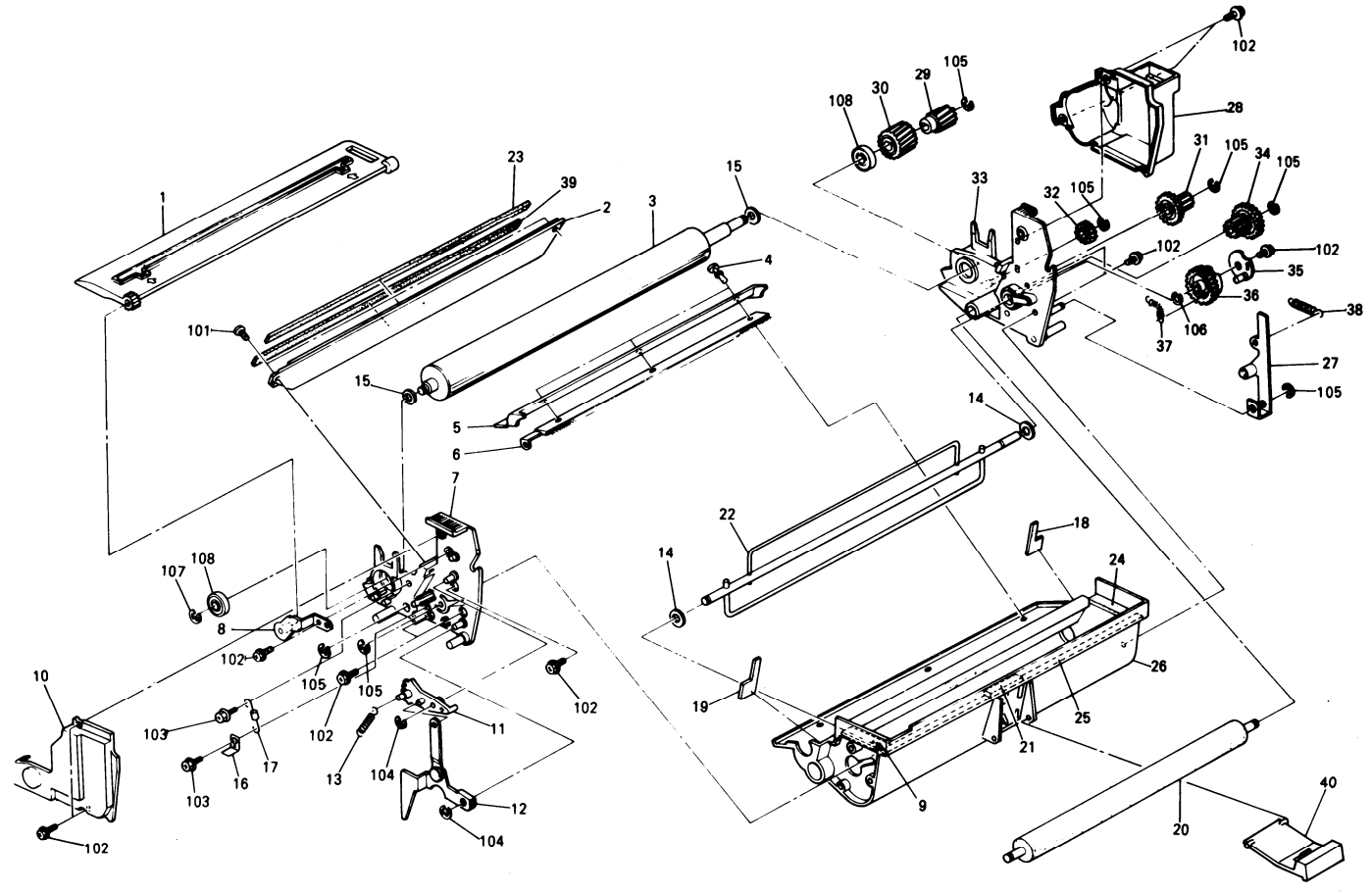
9. BLACK DEVELOPMENT UNIT

February 1,86



9. BLACK DEVELOPMENT UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
*	5216 3050	Development Unit - Black	1
1	5216 3110	Development Roller Cover	1
2	5216 3080	Toner Metering Blade	1
3	5216 3180	Black - Development Roller	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5216 3051	Front Side Plate - Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5216 3113	Roller Cover Spring	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3060	Rear Side Plate - Development	1
14	5216 3095	Seal - Toner Supply Bar	4
16	5216 3098	Toner Supply Bar	1
17	5216 3087	Toner Supply Mylar	1
18	5216 3067	Rear Side Seal	1
19	5216 3066	Front Side Seal	1
20	5216 3133	Drive Spring - Toner End	1
21	5216 3105	Toner End Spring	1
22	5216 3090	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front Cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
26	5927 3085	Front Toner Hopper Seal - Color	1
27	5216 3130	Toner End Actuator	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5214 3100	Gear - 24T	1
31	5214 3102	Gear - 20T	1
32	5214 3101	Gear - 12T	1
33	5214 3103	Gear - 18T	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5216 3083	Seal OBM	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
102	0720 0060E	Retaining Ring - M6	1
103	0805 3162	Ball Bearing - 10 x 19 x 7mm	2
104	0313 0060W	Philips Pan Head Screw - M3 x 6	2
105	0720 0040E	Retaining Ring - M4	6
106	0720 0030E	Retaining Ring - M3	2
107	0701 0050E	Flat Washer - M5	1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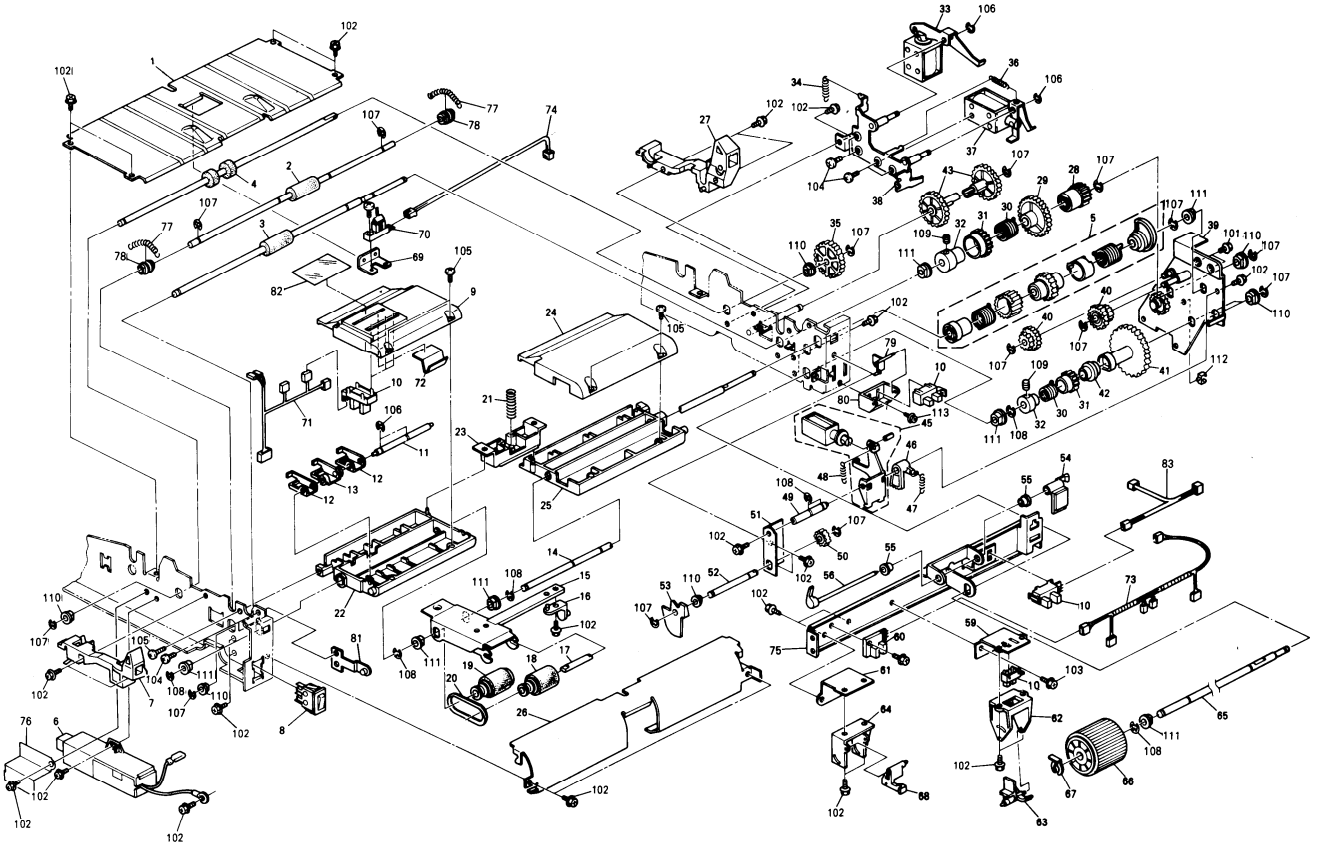
10. COLOR DEVELOPMENT UNIT

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 3110	Development Roller Cover	1
2	5927 3091	Toner Metering Blade - Color	1
3	5927 3130	Color Development Roller	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5927 3061	Front Side Plate - Color Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5927 3085	Front Toner Hopper Seal - Color	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3113	Roller Cover Spring	1
14	5921 3103	Seal - Toner Mixing Bar	2
15	5921 3084	Seal - Toner Supply Bar	2
16	5927 3067	Grounding Plate	1
17	1402 0560	Varistor - -180V ±10%	1
18	5216 3069	Rear Side Seal	1
19	5216 3068	Front Side Seal	1
20	5927 3114	Toner Supply Roller	1
21	5927 3088	Toner Hopper Seal - Upper	1
22	5927 3100	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front Cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
27	5927 3120	Toner End Actuator - Color	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5921 3110	Gear - 20T	1
31	5921 3111	Gear - 16T	1
32	5214 3101	Gear - 12T	1
33	5927 3071	Rear Side Plate - Color Development	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5927 3105	Toner End Spring - Color	1
38	5216 3133	Drive Spring - Toner End	1
39	5216 3083	Seal OBM	1
40	5220 3096	Color Plate - Red	1
	5220 3097	Color Plate - Green	1
	5220 3098	Color Plate - Blue	1
101	0313 0060W	Philips Pan Head Screw - M3 x 6	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	12
103	0443 0062W	Hexagon Head Tapping Screw - M3 x 6	2
104	0720 0030E	Retaining Ring - M3	3
105	0720 0040E	Retaining Ring - M4	5
106	0720 0050E	Retaining Ring - M5	1
107	0720 0060E	Retaining Ring - M6	1
108	0805 3162	Ball Bearing - 10 x 19 x 7mm	2

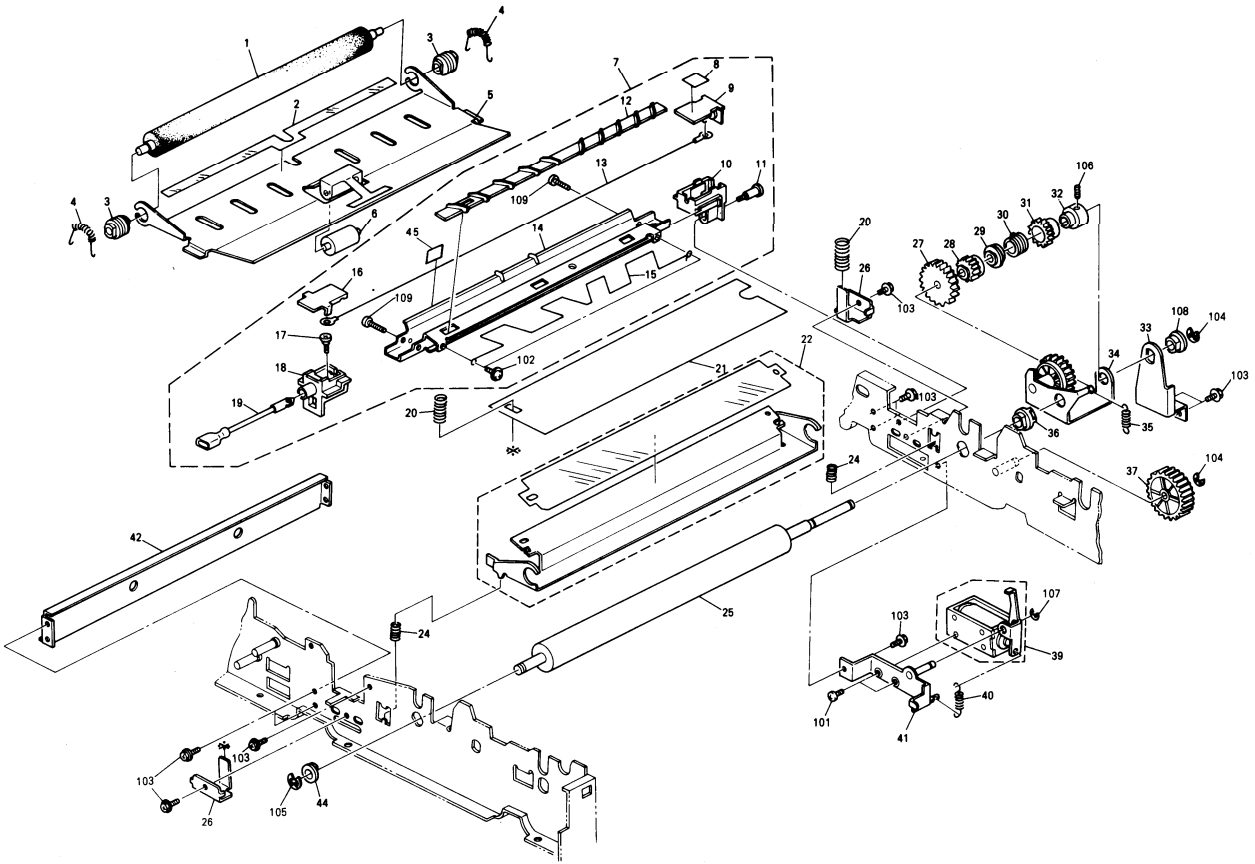


11. PAPER FEED SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2691	Lower Feed Guide	
2	5216 2572	1st Relay Roller	
3	5216 2571	1st Relay Roller - Lower	
4	5216 2581	2nd Relay Roller - Lower	
5	5220 2576	Tray Feed Clutch Ass'y	
6	5216 5203	Power Pack - Transfer/Bias	1
7	5216 3160	Front Development Guide	1
8	1204 1386	Main Switch	1
9	5220 2571	Front Feed Guide Cover	1
10	AW02 0001	Photointerruptor	6
11	AA14 0031	Shaft - Paper- Size Detection	1
12	5220 2567	Side Paper Size Feeler	2
13	5220 2568	Center Paper Size Feeler	1
14	AA14 0030	Paper Feed Shaft	1
15	5220 2557	Pick-up Roller Bracket	1
16	5220 2563	Lever - Pick-up Roller Bracket	1
17	AA14 5007	Pick-up Roller Shaft	1
18	5203 2591	Paper Pick-up Roller	1
19	5203 2582	Paper Tray Feed Roller	1
20	5203 2601	Drive Belt - Pick-up Roller	1
21	AA06 3009	Spring - Pick-up Roller Bracket	1
22	5220 2553	Front Feed Guide	1
23	5220 2554	Center Feed Guide	1
24	5220 2572	Rear Feed Guide Cover	1
25	5220 2555	Rear Feed Guide	1
26	5216 2616	Paper Turn Guide	1
27	5216 3162	Rear Development Guide	1
28	5216 2658	Gear - 18T	1
29	5216 2657	Gear - 36T (Grip)	1
30	5216 2633	Clutch Spring	2
31	5216 2634	Feed Clutch Sleeve	2
32	5216 2635	Clutch Output Hub	2
33	5216 2744	1st Relay Solenoid	1
34	5216 2737	Regiatration Solenoid Spring	1
35	5216 2582	Gear - 32T	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
36	5216 2748	Spring - Paper Feed Solenoid	1
37	5216 2746	Paper Feed Solenoid	
38	5216 2741	Bracket - Paper Feed Solenoid	
39	5220 2580	Support Plate - Feed Drive	1
40	AB01 3039	Gear - 20T/26T	2
41	5216 2632	Gear - 50T	
42	5216 2636	Clutch Input Hub	
43	5216 2643	Idle Gear - 40T (B)	2
45	5220 2596	Tray Feed Solenoid	1
46	AB01 3040	Sector Gear - 6T	
47	AA06 0019	Sector Gear Spring	1
48	AA06 0020	Spring - Tray Feed Solenoid	1
49	AA14 3013	Sector Gear Shaft	1
50	AB01 3041	Gear - 16T	1
51	5220 2710	Bracket - Tray Feed Solenoid	1
52	AA14 5008	Pick-up Roller Cam Shaft	1
53	5220 2601	Pick-up Roller Cam	1
54	5216 2717	Sensor Actuator	1
55	5443 2668	Bushing	2
56	5216 2715	Feeler Lever - Manual Feed	1
59	5220 2616	Bracket - Paper End Detection	1
60	5216 5233	Photointerruptor - IL-G-4P-S3T2-E	1
61	5220 2613	Bracket - Paper Length Detection	1
62	5220 2617	Feeler Bracket - Paper End	1
63	5220 2618	Feeler - Paper End Detection	1
64	5220 2611	Feeler Bracket - Paper Length	1
65	5216 2551	Feed Roller Shaft	1
66	5216 2552	Paper Feed Roller	1
67	5215 2621	Snap Ring - M6	1
68	5220 2612	Feeler - Paper Length Detection	1
69	5216 2693	Bracket - Paper Feed Sensor	1
70	5214 5235	Paper Feed Sensor	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
71	5220 5365	Paper Width Sensor	1
72	5220 2575	Harness Clamp Plate	1
73	5220 5366	Lower Harness - Paper Feed	1
74	5216 5307	Harness - Paper Feed Sensor	1
75	5216 2712	Paper Feed Bracket	1
76	5216 5820	Power Pack Cover - Transfer/Bias	1
77	AA06 0021	Spring - 1st Relay Roller	2
78	5216 2573	Registration Roller Bushing	2
79	5220 2607	Feeler - Paper Tray Sensor	1
80	5220 2606	Feeler Bracket - Paper Tray Sensor	1
81	5220 2713	Paper Tray Bracket	1
82	5220 2574	Seal - Paper Width Sensor	1
83	5220 5355	Rear Harness - Paper Feed	1
101	0313 0060W	Philips Pan Head Screw - M3 x 6	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	25
103	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	1
104	0313 0050W	Philips Pan Head Screw - M3 x 5	2
105	0802 5089	Tapping Screw - M3 x 8	3
106	0720 0030E	Retaining Ring - M3	4
107	0720 0040E	Retaining Ring - M4	14
108	0720 0060E	Retaining Ring - M6	7
109	0574 0040E	Hexagon Headless Set Screw - M4 x 4	2
110	0805 3385	Bushing - 6MM	6
111	0805 3386	Bushing - 8MM	8
112	1105 0199	Clamp	1
113	0314 0050W	Philips Pan Head - M4 x 5	1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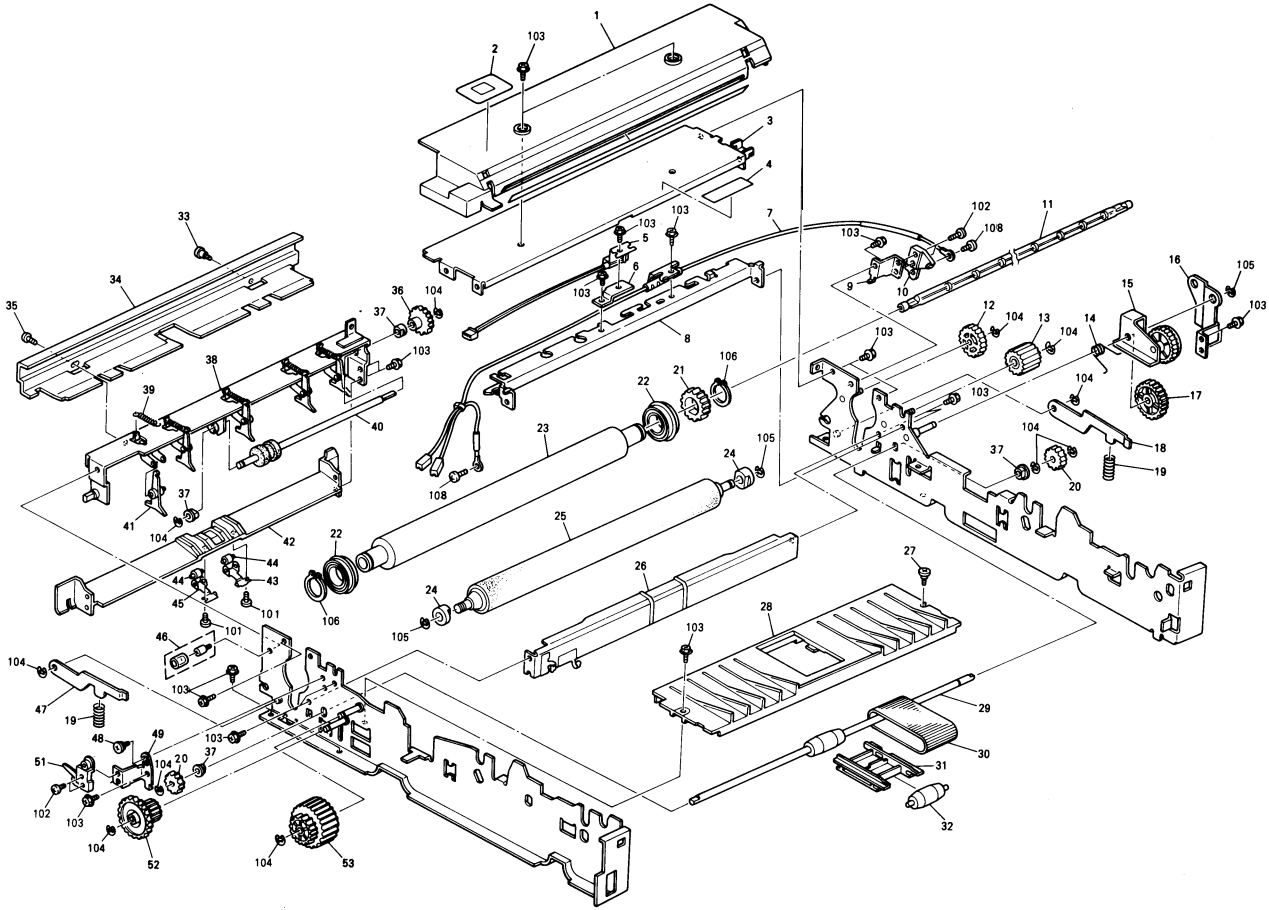
Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 2592	Upper Registration Roller	
2	5216 2619	Mylar - Upper Guide Plate	1
3	5216 2573	Registration Roller Bushing	2
4	5216 2593	Registration Roller Spring	2
5	5216 2612	Upper Guide Plate - Registration	1
6	5216 2615	2nd Relay Roller - Upper	1
7	5216 2101	Transfer Corona Ass'y - USA	1
	5216 2102	Transfer Corona Ass'y - 220V, ROC	1
9	5203 2108	Rear End Cover - Transfer Corona	1
10	5216 2107	Rear End Block - Transfer	1
11	5216 2113	Stepped Screw - Transfer	1
12	5216 2115	Transfer Guide Plate	1
13	5216 9001	Corona Wire - 10 pcs/Set	1
14	5216 2111	Transfer Corona Casing	1
15	0809 1013	Nylon Wire (50M/Roll)	1
16	5216 2104	Front End Cover - Transfer Corona	1
17	5203 2060	Corona Wire Screw - M3 x 4	1
18	5216 2103	Front End Block - Transfer	1
19	5216 5320	High Voltage Supply Cord - Transfer	1
20	5216 2112	Pressure Spring	2
21	5216 2124	Insulating Sheet	1
22	5216 2121	Guide Plate - Transfer Entrance	1
24	5203 2133	Pressure Spring - Transfer Corona	2
25	5216 2591	Lower Registration Roller	1
26	5216 2110	Pressure Spring Holder	2
27	5216 2662	Gear - 36T	1
28	5216 2663	Gear - 18T	1
29	5216 2636	Clutch Input Hub	1
30	5216 2664	Clutch Spring	1
31	5216 2665	Registration Clutch Sleeve	1
32	5216 2635	Clutch Input Hub	1
33	5216 2681	Support Plate - Registration Roller	1
34	5216 2679	Arm - Paper Feed Drive	1
35	5216 2676	Engage Gear Bracket - Registration Roller	1
36	5216 2678	Registration Roller Bushing - Rear	1
37	5216 2642	Idle Gear - 40T	

Index No.	Parts No.	Description	Q' ty Per Ass'y
39	5216 2731	Registration Solenoid	1
40	5216 2737	Registration Solenoid Spring	1
41	5216 2732	Registration Solenoid Bracket	1
42	5216 1133	Base Plate Stay	1
44	5304 1639	Bushing - 8mm	1
45	5216 2116	Mylar Seal - Transfer Guide Exit - USA	1
101	0313 0050W	Philips Pan Head Screw - M3 x 5	2
102	0951 3008W	Philips Screw with Flat Washer - M3 x 8	1
103	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	9
104	0720 0040E	Retaining Ring - M4	2
105	0720 0060E	Retaining Ring - M6	1
106	0574 0040E	Hexagon Headless Set Screw - M4 x 4	1
107	0720 0030E	Retaining Ring - M3	1
108	0805 3385	Bushing - 6MM	1
109	0313 0220W	Philips Pan Head Screw - M3 x 22	2

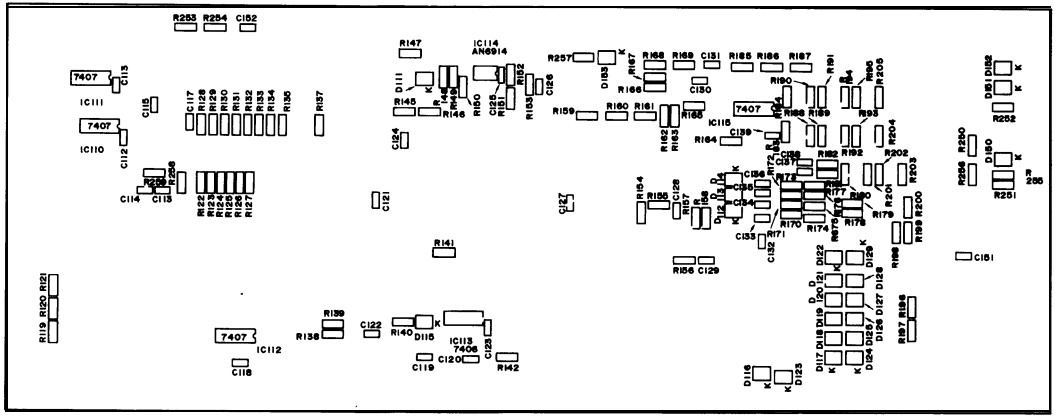
13. FUSING SECTION



13. FUSING SECTION

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5216 4169	Fusing Cover - 115V	1
	5216 4170	Fusing Cover - 220/240V	1
2	5442 4421	Decal -Small -115V	1
	5442 6126	Small Decal - High Temperature - 220/240V	1
3	5216 4127	Fusing Stay	1
4	5216 4145	Thermofuse Decal	1
5	5216 5258	Thermistor	1
6	5216 4144	Thermistor Bracket	1
7	5216 5425	Thermofuse - 169°C	1
8	5216 4143	Thermofuse Stay	1
9	5216 4099	Rear Heater Bracket	1
10	5216 4100	Rear Heater Terminal	1
11	5442 5722	Heater - 115V, 960W	1
	5442 5752	Heater - 240V/960W	1
12	5216 4150	Gear - 24T	1
13	5216 4074	Gear - 20T	1
14	5216 4072	Fusing Arm Spring	1
15	5216 4068	Fusing Drive Arm	1
16	5216 4075	Bracket - Transfer Gear	1
17	5216 4073	Gear - 34T	1
18	5216 4086	Rear Pressure Lever	1
19	5216 4090	Fusing Pressure Spring	2
20	5216 3915	Gear - 18T	2
21	5214 4108	Gear - 30T	1
22	5216 4107	Ball Bearing - 37 x 20 x 9MM	2
23	5216 4106	Hot Roller	1
24	5216 4118	Pressure Roller Bushing	2
25	5216 4110	Pressure Roller	1
26	5216 4155	Lower Guide Plate	1
27	5206 2684	Shoulder Screw - M3	1
28	5216 3903	Transport Guide Plate	1
29	5216 3911	Driven Roller - Transport Belt	1
30	5216 3914	Transport Belt	1
31	5216 3912	Transport Belt Holder	1
32	5214 3855	Inverted Roller - Transport Belt	1

Index No.	Parts No.	Description	Q'ty Per Ass'y
33	5216 4220	Screw - M3	1
34	5216 4195	Exit Cover	1
35	5216 4221	Screw - M3	1
36	5216 4205	Gear - 19T	1
37	5216 4207	Bushing - 6MM	2
38	5216 4180	Side Plate - Paper Exit	1
39	5203 4168	Stripper Spring	5
40	5216 4202	Upper Exit Roller	1
41	5216 9002	Hot Roller Stripper - 5 pcs/Set	1
42	5216 4197	Lower Guide Plate - Paper Exit	1
43	5216 4215	Rear Guide Roller	1
44	5214 4235	Exit Roller	2
45	5216 4213	Front Guide Roller	1
46	5203 1124	Stopper Pin - Top Unit	1
47	5216 4085	Front Pressure Lever	1
48	5447 2769	Stepped Screw	1
49	5216 4103	Front Heater Bracket	1
51	5216 4095	Pressure Lever	1
52	5216 4134	Idle Gear - 38T	1
53	5216 4133	Paper Reverse Knob	1
101	0313 0050W	Philips Pan Head Screw - M3 x 5	2
102	0313 0100W	Philips Pan Head Screw - M3 x 10	2
103	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	21
104	0720 0040E	Retaining Ring - M4	1
105	0720 0060E	Retaining Ring - M6	3
106	0725 0200E	Retaining Ring C - M20	1
107	0805 3385	Bushing - 6MM	1
108	0950 3005M	Philips Screw with Flat Washer - M3 x 5	1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R252
7407
IC111
C113
C115
C117
R128 R129 R130 R131 R132 R133 R134 R135
R157
7407
IC110
C112
R146
R150
R153
C126
R159
R160 R161
R162 R163
R168
C150
7407
IC115
C139
R164
R165 R167
R188 R189
R193
R204
R205
R202
R192
R203
R250
R256
D150
R251
R255
C114
C116
R254
R255
R122 R123 R124 R125 R126 R127
C121
C127
R154
R155
C128
R156
C129
C135
C134
R170
R171
R174
R175
R176
R177
R178
R179
R200
R199
C133
C132
R141
R156 C129
D122
D129
R198
C151
R119 R120 R121
R139
C122
R140
D115
IC113 7406
C123
7407
IC112
R138
C118
C120
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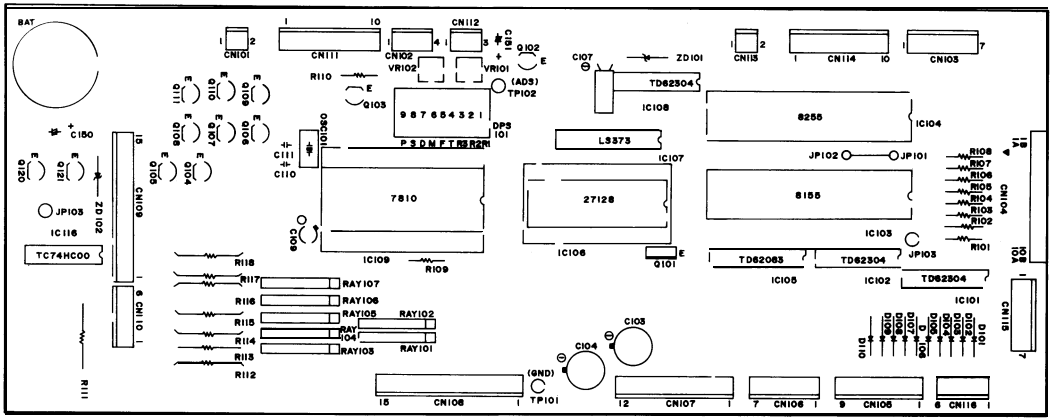
D123
D121
D120
D118 D119
D117
D124 D127 D128
D125 D126
R197 R196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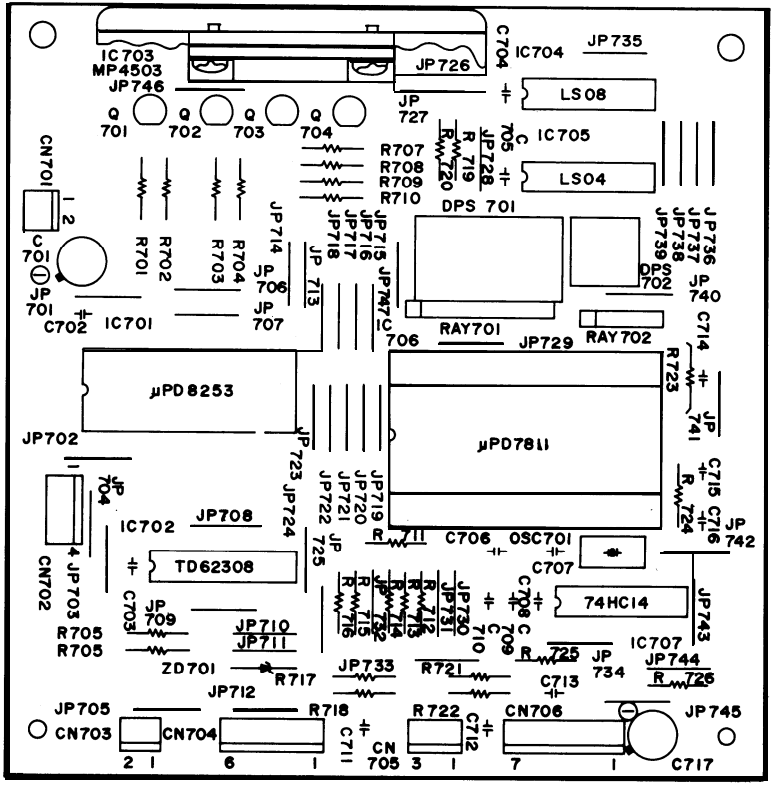
CN112
CN102
VR102
VR101
Q102
C107
ZD101
CN113
CN114
CN103
R110
Q103
(ADJ)
TP102
TD62504
IC106
9 8 7 6 5 4 3 2 1
P S D M F T R S R2M
DPS 101
LS373
IC107
8255
IC104
JP102
JP101
C150
C111
C110
C109
7810
IC109
R109
27128
IC108
Q101
8155
IC103
R108
R107
R106
R105
R104
R103
R102
R101
CN104
JP103
IC116
TC74HC00
R118
R117
R116
R115
R114
R113
R112
RAY107
RAY106
RAY105
RAY102
RAY104
RAY103
RAY101
TD62083
TD62304
IC105
IC102
TD62304
IC101
JP103
CN110
CN115
C108
C104
C105
R111
(GND)
TP101
15 CN108
12 CN107
7 CN106
9 CN105
6 CN116

14. MAIN BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5220 5105	Main Board	1
1	IC109	1407 1334	IC - μPD781OG	1
2	IC104	1407 1016	IC - UPD8255AC-5	1
3	IC103	1407 1806	IC - MSM81C55RS	1
4	IC107	1407 1026	IC - SN74LS373N	1
5	IC110,111 112,115	1407 1610	IC - SN7407NS	4
6	IC113	1407 1305	IC - SN7406NS	1
7	IC116	1407 1833	IC - TC74HCOOP	1
8	IC105	1401 0332	Transistor - TD62083AP	1
9	IC101,102 108	1407 1348	IC - TD62304P	3
10	IC114	1408 0456	IC - AN6914S	1
11	Q103	1400 0208	Transistor - 2SC945	1
12	Q102,104-111	1400 0347	Transistor - 2SB101O	9
13	Q101	1400 0352	Transistor - 2SD1198A	1
14	Q120	1400 0135	Transistor - 2SA1015-Y	1
15	Q121	1400 0072	Transistor - 2SC372Y	2
16	D101-110	1401 0815	Diode - 1S1588	10
17	D111-129, 150,153	1402 0476	Diode - 1SS184	21
18	ZD101	1402 0524	Zener Diode - 4.6V, 400MW	1
19	ZD102	1401 0769	Zener Diode - RD3.6EB	1
20	IC106	1104 0271	LSI Socket - 28P	1
21	OSC101	1503 0070	Ceramic Oscillator - 10MHz	1
22	C110,111	1606 1184	Capacitor - 27PF 50V	2
23	C150	1604 1563	Capacitor - 68μF 10V	1
24	C104	1604 1357	Capacitor - 470μF, 10V	1
25	C109	1604 1363	Capacitor - 10μF 25V	1
26	C107,155	1604 1378	Capacitor - 1μF 50V	2
27	C103	1604 1386	Capacitor - 100μF 50V	1
28	C112-120, 121-139,152	1606 1452	Capacitor - 0.01μF 50V	29
29	R111-118	1601 1810	Resistor - 380 OHM ±5%	8
30	R109	1622 1001	Resistor - 1K OHM 1/4T ±1%	1
31	R110	1622 4702	Resistor - 47.2K OHM 1/4W ±1%	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
32	R101-108	1611 4181	Resistor - 180 OHM 1/4T	8
33	R146,188,190 192,194,201, 203-205,250, 251	1610 0053	Resistor - 1K OHM 1/8W ±5%	11
34	R150	1610 0056	Resistor - 1.3K OHM 1/8W ±5%	1
35	R180,183,184 189,191,193 195,202	1610 0061	Resistor - 2.2K OHM 1/8W ±5%	8
36	R174-179	1610 0065	Resistor - 3.3K OHM 1/8W ±5%	6
37	R122,138,142 147,153,154, 157-163,165, 253,255-259	1610 0067	Resistor - 4.7K OHM 1/8W ±5%	20
38	R119-121, 123-135,137 141,152,148	1610 0071	Resistor - 10K OHM ±5%	20
39	R140,186, 196-200	1610 0073	Resistor - 12K OHM 1/8W ±5%	7
40	R139,151, 155,156,166, 167,170-173, 181,182,185, 187,254,260	1610 0079	Resistor - 22K OHM 1/8W ±5%	16
41	R145	1610 0084	Resistor - 39K OHM 1/8W ±5%	1
42	R164,168,169	1610 0107	Resistor - 111 OHM 1/8W ±5%	3
43	R253	1610 0035	Resistor - 100 OHM 1/8W ±5%	1
44	RAY101-107	1601 7150	Resistor Array - 12K OHM	7
45	R149	1610 0115	Resistor - 4.7M OHM 1/8T	1
46	CN101	1103 0778	Connector - 2P	1
47	CN104	1102 2307	Connector - 20P	1
48	CN113	1103 1768	Connector - 2P	1
49	CN112	1103 1769	Connector - 3P	1
50	CN102	1103 1770	Wafer - 4P	1
51	CN116	1103 1772	Pin Header - 6P	1
52	CN103, 106	1103 1773	Pin Header - 7P	2
53	CN105	1103 1775	Pin Header - 9P	1
54	CN111,114	1103 1776	Pin Header - 10P	2
55	CN107	1103 1778	Pin Header - 12P	1
56	CN108	1103 1781	Pin Header - 15P (Brown)	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
57	CN110	1103 1786	Pin Header - 6P	1
58	CN115	1103 1787	Pin Header - 7P	1
59	CN109	1103 1795	Pin Header - 15P (Red)	1
60	TP101,102	1101 0328	Connector Pin Contact	2
61	DPS101	1204 1418	Dip Switch	1
62	IC106	5220 5107	Ic - HN482764G - 3	1
63	IP103	1002 0133W	Jumper Wire	
64	IR101	1601 8138	Variable Resistor -30K OHM 0.75W	1
65	IR102	1601 8139	Variable Resistor- 50K OHM 0.5W	1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Q
701
Q
702
Q
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C
705
IC705
LS04
R707
R708
R709
R710
R719
R720
JP728
DPS 701
DPS
702
JP736
JP737
JP738
JP739
JP740
CN701
1
2
C
701
JP
701
C702
IC701
JP
707
JP
706
JP 713
JP714
JP715
JP716
JP717
JP718
JP747
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R702
R703
R704
C
706
RAY701
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R725
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CN704
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R722
C712
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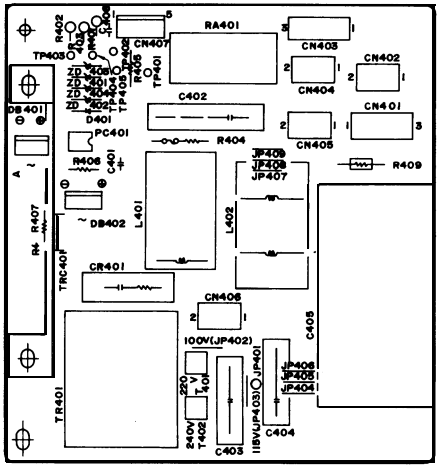
1
6
1
C711
CN
705
3
1
7
1
C717

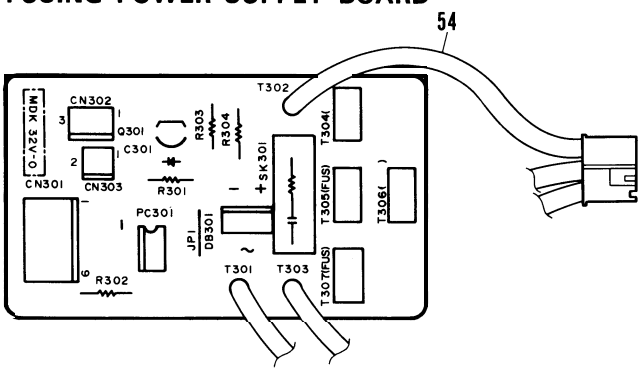
15. OPTICS BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5220 5120	Optics Board	1
1	CN701	1103 0778	Connector - 2P	1
2	CN702	1100 1092	Connector - EI Vertical Type - 4P/White	1
3	CN703	1103 1768	Connector - 2P	1
4	CN704	1103 1772	Pin Header - 6P	1
5	CN705	1103 1769	Connector - 3P	1
6	CN706	1103 1773	Pin Header - 7P	1
7	JP701 -747	1002 0307	Jumper Wire	
8	DPS701	1204 1327	Dip Switch	1
9	DPS102	1204 1325	Dip Switch	1
10	Q701 -704	1400 0031	Transistor - 2SC458B	4
11	IC703	1401 0329	IC - MP4503	1
12	IC701	1407 1534	IC - MPD8253C-2	1
13	IC702	1407 1535	IC - TD62308AP	1
14	IC704	1407 0621	IC - SN74LS08N	1
15	IC705	1407 0508	IC - HD74LS04N	1
16	IC706	5220 5123	IC - µPM7811G	1
		1104 0339	IC Socket - 64P	1
17	IC707	1407 1537	IC -TC74HC14P	1
18	0SC701	1503 0070	Ceramic Oscillator - 10MHz	1
19	ZD701	1402 0277	Zener Diode - 1Z12	1
20	RAY701	1601 7374	Resistor Array - 4.7K OHM	1
21	RAY702	1601 7352	Resistor Array - 4.7K OHM	1
22	C717	1604 1355	Capacitor - 220µF 10V	1
23	C701	1604 1386	Capacitor - 100µF 50V	1
24	C706,707, 709,710	1606 0867	Capacitor - 3300pF 50V	4
25	C702-705,708 711-714	1606 1336	Capacitor - 1000PF 50V	9
26	C715,716	1606 1184	Capacitor - 27PF 50V	2
27	R724	1611 4105	Resistor - 1M OHM 1/4T ±5%	1
28	R705,706	1611 4102	Resistor - 1K OHM 1/4T ±5%	2
29	R701 ,703, 707,710	1611 4272	Resistor - 2.7K OHM 1/4T ±5%	4
30	R715,716,718 722,723,726	1611 4332	Resistor - 3.3K OHM 1/4T ±5%	6
31	R702,704,725	1611 4103	Resistor - 10K OHM 1/4T ±5%	3
32	R717,721	1611 4223	Resistor - 22K OHM 1/4T ±5$	2
33	R711-714, 719,720	1611 4472	Resistor - 4.7K OHM 1/4T ±5%	6
34	R708,709	1611 4333	Resistor - 33K OHM 1/4T ±5%	2

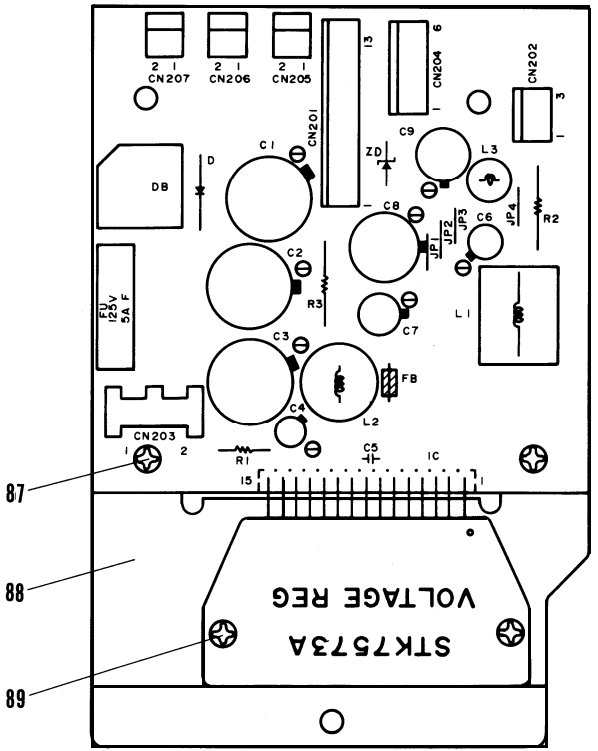
AC DRIVE BOARD



FUSING POWER SUPPLY BOARD



DC POWER SUPPLY BOARD



16. PCBS

AC DRIVE BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*	-	5220 5560	AC Drive Board - 115V	
		5220 5660	AC Drive Board - 220/240V	
1	CN401	1102 0484	Terminal - 3P	1
2	CN402	1102 0766	Wafer - 2P	1
3	CN403	1102 2387	Wafer - 3P	1
4	CN404	1102 2115	Wafer - 2P	1
5	CN405	1103 1446	Wafer - 2P	1
6	CN406	1103 1445	Wafer - 2P	1
7	CN407	1103 1771	Connector - 5P	1
8	RA401	1208 1041	Power Supply - DC24V	1
9	PC401	1405 0127	Thyristor -TLP541G (115V)	1
		1405 0151	Photothyristor - TLP545J (220V)	1
10	D8401	1405 0129	Rectifier - 100V 1.0A IB4B42	1
11	D8402	1405 0130	Rectifier - 400V 10A IG4B42 (115V)	1
		1405 0152	Rectifier - 1J4B42 (220V)	1
12	CR401	1602 0895	Noise Killer -0.1μF, 120 OHM (115V)	1
		1602 0920	Noise Killer - 0.1μF 120 OHM (220V)	1
13	ZD401	1402 0433	Zener Diode - HZ982 - 09	1
14	ZD402	1402 0539	Zener Diode - HZ9C - 2	1
15	ZD403	1402 0416	Zener Diode - HZ58 - 1	1
16	ZD404	1402 0407	Zener Diode - HZ-6B3	1
17	TR401	AZ10 0001	Transformer - 115V	1
		AZ10 0002	Transformer - 220/240V	1
18	L401	1607 0134	Choke Coil - 250MH 6A	1
		8851 0771	Choke Coil -88MH 3.3A	1
19	L402	1201 0061	SC Coil - SC-05-800	1
20	R401	1611 4242V	Resistor - 2.4K OHM 1/4W ±5%	1
21	R402	1611 4153V	Resistor - 15K OHM 1/4W ±5%	1
22	R403	1611 4103V	Resistor - 10K OHM 1/4T ±5%	1
23	R404	1601 7468	Fuse Resistor - 100 OHM 1/2w	1
24	R405	1611 6222	Resistor - 2.2K OHM 1/2T ±5%	1
25	R406	1611 4223	Resistor - 22K OHM 1/4T ±5%	1
26	R407	1611 4820	Resistor - 82 OHM 1/4T ±5%	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
27	TP401-405	1101 0328	Connector Pin Contact (220V)	5
28	R409	1600 1057	Resistor - 56K OHM 2T (220V)	1
29	C401,406	1606 0689	Capacitor - 0.01μF 50V	2
30	C402	1606 1400	Capacitor - 0.1μF	1
		1606 1495	Capacitor - 0.1μF 250V	1
31	C405	1606 1549	Capacitor - 10μF AC250V (220V)	1
32	T401,402	1103 0988	Wire Post (220V)	2
33	J401	1002 0133W	Jumper Wire (220V)	
34	D401	1401 0815	Diode - 1S1588	1
35	TP401-405	1101 0328	Connector Pin Contact (115V)	1
36	JP403-409	1002 0307	Jumper Wire (115V)	
37	Triac	5220 5463	Triac - 115V	1
		5220 5662	Triac - 220/240V	1

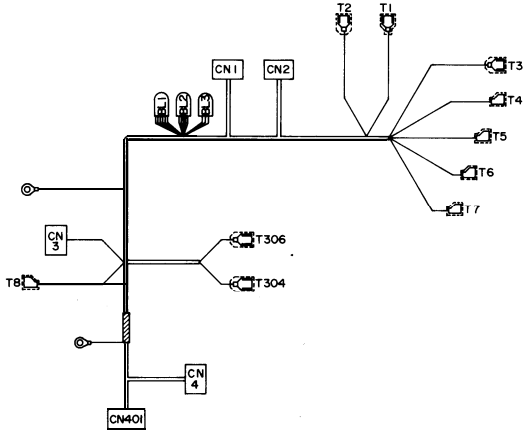
FUSING POWER SUPPLY BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5216 5445	Fusing Power Board Ass'y - 115V	1
		5216 5645	Fusing Power Board Ass'y - 220V	1
40	PC301	1405 0127	Thyristor - TLP541G (115V)	1
		1405 0151	Photothyristor - TLP545J (220V)	1
41	Q301	1400 0305	Transistor - 2SC1815	1
42	DB301	1405 0130	Rectifier - 400V 10A IG4B42 (115V)	1
42		1405 0152	Rectifier - 1J4B42 (220V)	1
43	C301	1606 0689	Capacitor -0.01µF 50V	1
44	R301	1611 4273	Resistor - 27K OHM 1/4T +-5%	1
45	R302	1611 5222	Resistor - 2.2K OHM 1/2W	1
46	R303	161 14563	Resistor - 56K OHM 1/4T+-5%	1
47	R304	1611 5224	Resistor - 220K OHM 1/2W	1
48	JP1	1002 0307	Jumper Wire	1
49	SK301	1602 0940	Noise Killer - 0.1µF, 10 OHM	1
		1602 0920	Noise Killer - 0.1µF 120 OHM	1
50	CN301	1103 1814	Pin Header - 6P	1
51	CN302	1103 1769	Connector - 3P	1
52	CN303	1103 1768	Connector - 2P	1
53	T304-307	1100 0657	Fastening Tab	4
54		5216 5447	Fusing Power Harness	1

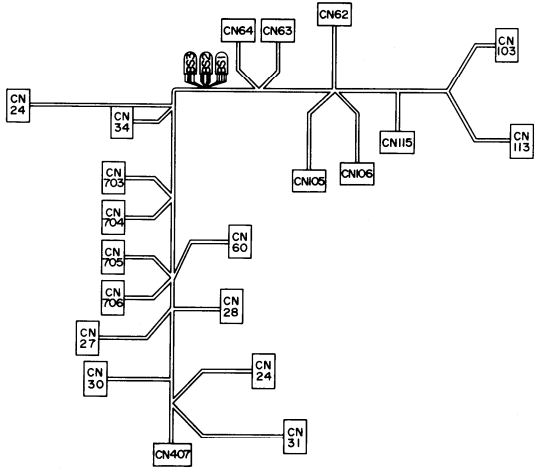
DC POWER SUPPLY BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5216 5150	DC Power Supply Board	1
60	L1	1607 0102	Choke Coil - 300MH 2A	1
61	L2	1607 0097	Choke Coil - 300MH 2A	1
62	L3	1607 0103	Choke Coil - 15MH 1A	1
63	FB	1607 0071	Inductor Coil	1
64	IC	1408 0414	Chopper Regulator	1
65	DB	1405 0136	Rectifier - 3B4B41LC1	1
66	D	1401 0840	Diode - 3001	1
67	c1-3	1604 1093	Capacitor - 1000µF 50V	3
68	C4	1604 1378	Capacitor - 1µF 50V	1
69	C5	1606 1333	Capacitor - 2200PF 50V	1
70	C6	1604 1387	Capacitor - 220µF 50V	1
71	C7	1604 1386	Capacitor - 100µF 50V	1
72	C8	1604 1440	Capacitor - 1000µF 35V	1
73	C9	1604 1358	Capacitor - 1000µF 10V	1
74	R1	1600 0678	Resistor - 4.7K OHM 1W	1
75	R2,3	1600 0669	Resistor - 0.2 OHM 2W ±5%	2
76	FU	1107 0391	Fuse - 5A, 125V	1
77	-	1104 0351	Fuse Holder	2
78	JP1 -4	1002 0307	Jumper Wire	
79	CN201	1103 1779	Pin Header - 13P	1
80	CN202	1103 1783	Connector - 3P	1
81	CN203	1103 3040	Spring Header - 2P	1
82	CN204	1103 1772	Pin Header - 6P	1
83	CN205	1103 1824	Pin Header -2P (Red)	1
84	CN206	1103 1810	Pin Header - 2P (Brown)	1
85	CN207	1103 1838	Pin Header -2P (Black)	1
86	ZD	1402 0430	Zener Diode - BZ - 071	1
87	-	0313 0050B	Philips Pan Head Screw -M3x5	2
88	-	5216 5852	DC Supply Board Bracket	1
89	-	0313 0120B	Philips Pan Head Screw-M3x12	2

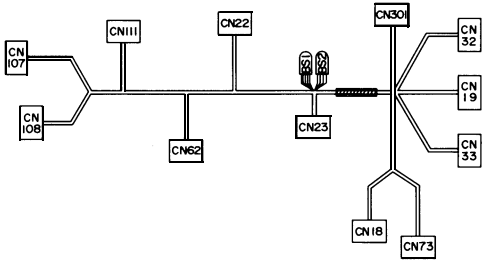
AC HARNESS



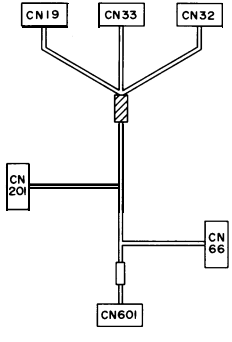
UPPER REAR HARNESS



UPPER FRONT HARNESS



LOWER UNIT HARNESS



17. HARNESS

AC HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5220 5361	AC Harness	
1	CN1	1102 1515	Connector - 2P	1
		1100 1241	Socket - Mate-N-Lock	2
2	CN2	1102 1515	Connector - 2P	1
		1100 1241	Socket - Mate-N-Lock	2
3	CN3	1102 1006	Connector - 1P	1
		1100 1043	Pin - MATE-N-LOCK	1
4	CN4	1102 1515	Connector - 2P	1
		1100 1241	Socket - Mate-N-Lock	2
5	CN401	1102 2385	Socket Housing - 3P	1
		1100 1247	Terminal	3
6	T1	1102 0717	Fasten Connect Sleeve	1
		1100 0270	Fastening Receptacle	1
7	T2	1102 1402	Receptacle Housing - 1P	1
		1100 1171	Fastening Receptacle	1
8	T3,304,306	1102 1404	Receptacle Housing	3
		1100 1171	Fastening Receptacle	3
9	T4-T8	1102 1842	Insulating Sleeve	5
		1100 0301	Fastening Receptacle	5
10	T9,10	1100 0092	Solid Strand	2

UPPER FRONT HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		5220 5350	Upper Front Harness	
20	CN107	1102 1992	Socket Housing - 12P	1
		1100 1329	Socket Contact	11
21	CN108	1102 1995	Socket Housing - 15P	1
		1100 1329	Socket Contact	15
22	CN111	1102 1990	Socket Housing - 10P	1
		1100 1329	Socket Contact	10
23	CN301	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
24	CN18	1102 1985	Socket Housing - 5P	1
		1100 1329	Socket Contact	4
25	CN22	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
26	CN23	1102 1982	Socket Housing - 2P	1
		1110 1329	Socket Contact	2
27	CN19	1102 1990	Socket Housing - 10P	1
		1100 1329	Socket Contact	10
28	CN33	1102 2014	Socket Housing - 6P	1
		1100 1329	Socket Contact	5
29	CN32	1102 2000	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
30	CN73	1102 1998	Socket Housing - 5P	1
		1100 1329	Socket Contact	8
31	CN62	1102 2010	Socket Housing - 2P	1
		1100 1329	Socket Contact	2

UPPER REAR HARNESS

Index No.	Sketch No.	Parts No,	Description	Q' ty Per Assembly
*		5220 5351	Upper Rear Harness	
40	CN103	1102 1987	Pin Housing-MATE-N-LOCK-6P	1
		1100 1329	Socket Contact	7
41	CN105	1102 1989	Socket Housing - 9P	1
		1100 1329	Socket Contact	7
42	CN106	1102 1987	Pin Housing-MATE-N-LOCK-6P	1
		1100 1329	Socket Contact	7
43	CN113	1102 1982	Socket Housing - 2P	1
		1100 1329	Socket Contact	2
44	CN115	1102 2001	Socket Housing - 7P	1
		1100 1329	Socket Contact	6
45	CN407	1102 1985	Socket Housing - 5P	1
		1100 1329	Socket Contact	5
46	CN703	1102 1982	Socket Housing - 2P	1
		1100 1329	Socket Contact	2
47	CN704	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
48	CN705	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
49	CN706	1102 1987	Pin Housing -MATE-N-LOCK-6F	1
		1100 1329	Socket Contact	6
50	CN24	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
51	CN34	1102 0185	Connector - 4P	1
		1100 0844	Socket - Mate-N-Lock	4
52	CN24	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
53	CN27	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
54	CN28	1102 1996	Socket Housing - 2P	1
		1100 1329	Socket Contact	2
55	CN30	1102 1982	Socket Housing - 2P	1
		1100 1329	Socket Contact	2
56	CN31	1102 1984	Socket Housing - 4P	1
		1100 1329	Socket Contact	4
57	CN62	1102 2038	Socket Housing - 2P	1
		1100 1330	Socket Contact	2
58	CN63	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
59	CN64	1102 1942	Connector - 6P	1
		1100 1327	Contact	6
60	CN60	1102 2028	Pin Housing - 8P	1
		1100 1330	Socket Contact	7

LOWER UNIT HARNESS

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*		5220 5352	Lower Unit Harness	
70	CN201	1102 1993	Socket Housing - 13P	1
		1100 1329	Socket Contact	13
71	CN601	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
72	CN19	1102 2029	Pin Housing - 10P	1
		1100 1330	Socket Contact	10
73	CN33	1102 2041	Pin Housing - 6P	1
		1100 1330	Socket Contact	5
74	CN32	1102 2034	Pin Housing - 6P	1
		1100 1330	Socket Contact	6
75	CN66	1102 2031	Pin Housing - 2P	1
		1100 1330	Socket Contact	2

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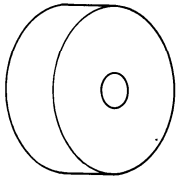

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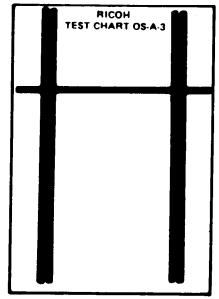

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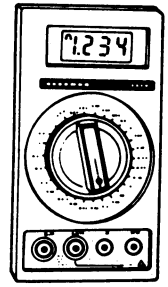

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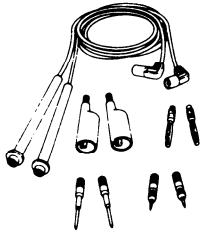

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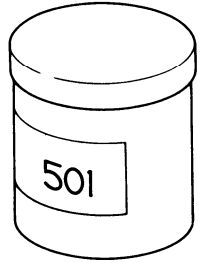

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5	5447 9078	Heat Resisting Grease MT-78	1
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1610 0084	Resistor - 39K OHM 1/8W ±5%	29-41
1610 0107	Resistor - 111 OHM 1/8W ±5%	29-42
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1611 4103	Resistor - 10K OHM 1/4T ±5%	31-31
1611 4103V	Resistor - 10K OHM 1/4T ±5%	33-22
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DOCUMENT FEEDER DF36

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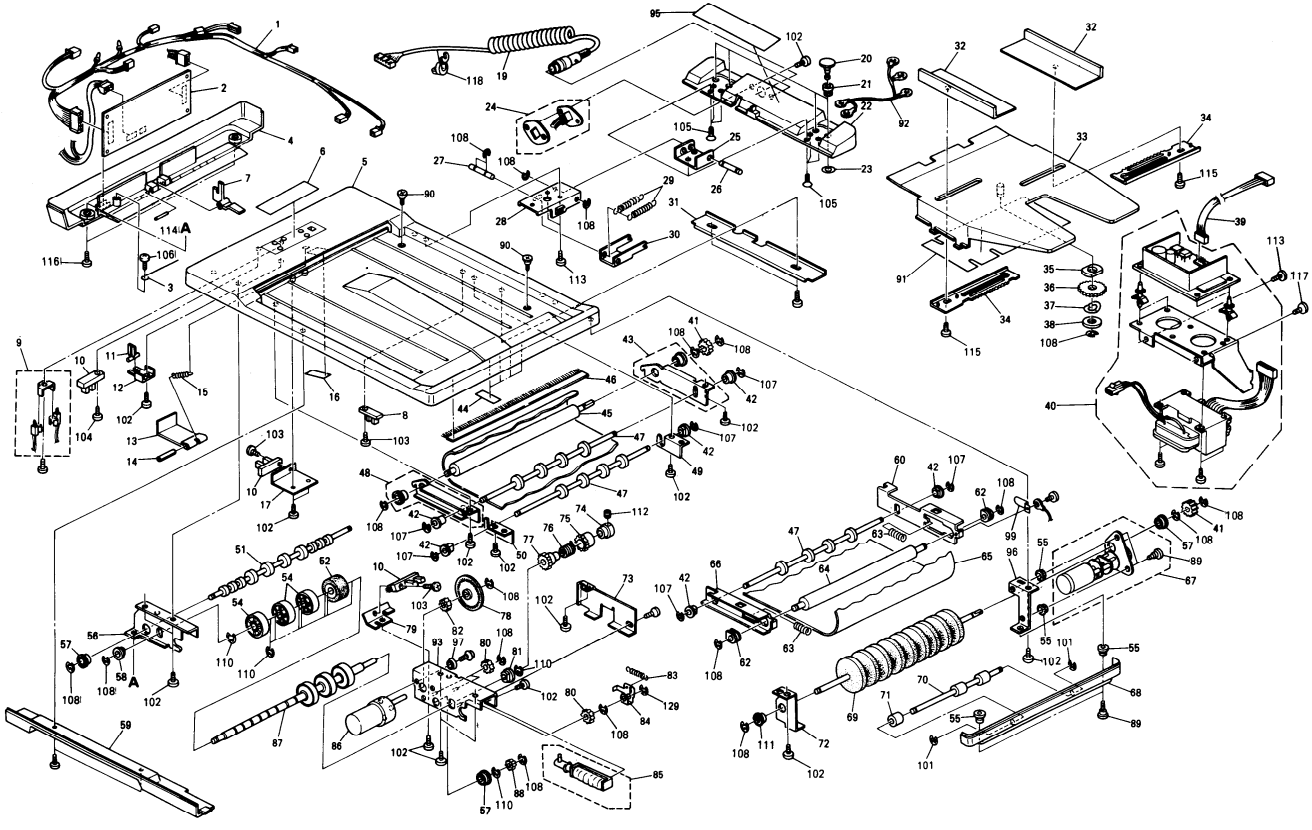
1.DOCUMENT FEEDER



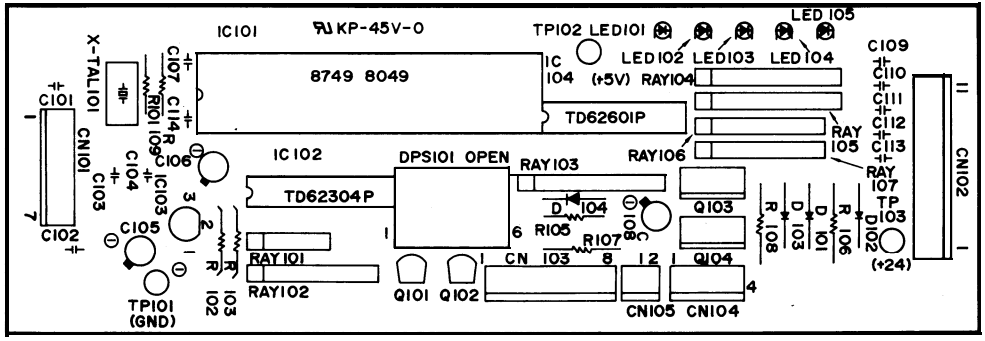
1. DOCUMENT FEEDER

Index No.	Parts No.	Description	Q'ty Per Ass'y
1	5940 5200	Main Harness	1
2	5940 5105	OF Main Board	1
3	5940 1128	Spring - Feed-in Sensor Actuator	1
4	5940 1215	Lower Left Cover	1
5	5940 1253	Upper Cover - 115	1
	5940 1273	Upper Cover - 220V	1
6	5940 1207	Indicator Decal	1
7	5940 1127	Feed-in Sensor Actuator	1
8	5201 5303	Photointerrupter	1
9	5940 5210	Indicator LED	1
10	5205 5251	L.E.D. Sensor Type - T	3
11	5940 1121	Feeler - Original Set Sensor	1
12	5940 1122	Feeler Holder	1
13	5940 1061	Friction Belt	1
14	0623 0250W	Spring Pin - 3 x 25mm	1
15	5940 1065	Tension Spring - Friction Belt	1
16	5940 1066	Entrance Mylar	1
17	5940 1125	Bracket - Original Set Sensor	1
19	5940 5225	Interface Cord	1
20	5216 1393	Ratch - Plunger	4
21	5216 1372	Ratch - Grommet	4
22	5940 1225	Rear Cover	1
23	5203 1359	Platen Cover Washer	4
24	5940 5204	Interface Harness	1
25	5940 1311	Hinge Holder	2
26	5940 1319	Hinge Fulcrum Shaft	2
27	5940 1318	Hinge Shaft	2
28	5940 1315	Hinge Bracket	2
29	5940 1321	Hinge Spring	4
30	5940 1317	Hinge Arm	2
31	5940 1240	Harness Cover	1
32	5940 1235	Side Fence - Original Tray	2
33	5940 1233	Original Tray	1
34	5940 1237	Side Fence Rack	2
35	5443 2712	Cork Pad	1

Index No.	Parts No.	Description	Q' ty Per Ass'y
36	5443 2657	Gear - 28Z	1
37	5443 2713	Wave Washer	1
38	5443 2660	Spacer - 6x22x0.5mm	1
39	5940 5205	Interface Harness	1
40	5940 5360	Power Supply Unit - 115V	1
	5940 5370	Power Supply Unit - 220V	1
41	5940 1073	Gear - 18T	2
42	5840 2416	Bushing - Pinch Roller	6
43	5940 1145	Rear Bracket - Transport Belt	1
44	5940 1194	Mylar - 10 x 31 mm	4
45	5940 1173	Drive Roller - Transport Belt	1
46	5940 1199	Antistatic Brush	1
47	5940 1156	Pressure Roller - Transport Belt	3
48	5940 1141	Front Bracket - Transport Belt	1
49	5940 1153	Rear Bracket - Pressure Roller	1
50	5940 1151	Front Bracket - Pressure Roller	1
51	5940 1081	Lower Relay Feed Roller	1
52	5940 1110	Feed Roller	1
54	5940 1088	Upper Relay Feed Roller	6
55	5940 1198	Rubber Bushing	4
56	5940 1051	Front Plate - Original Feed	1
57	5940 1330	Ball Bearing	3
58	5053 0447	Bushing - 6 x10x 6mm	1
59	5940 1210	Front Lower Cover	1
60	5940 1164	Rear Bracket - Right Transport Roller	1
62	5940 1165	Bushing - Right Transport Roller	2
63	5940 1178	Transport Belt Spring	2
64	5940 1175	Right Transport Roller	1
65	5940 1170	Transport Belt	1
66	5940 1162	Front Bracket - Right Transport Roller	1
67	5940 5311	Exit Motor	1
68	5940 1220	Exit Cover	1
69	5940 1192	Exit Roller	1
70	5940 1195	Shaft - Upper Exit Roller	1
71	5940 1196	Upper Exit Roller	3

Index No.	Parts No.	Description	Q'ty Per Ass'y
72	5940 1181	Front Bracket - Exit Roller	1
73	5940 1242	Gear Cover	1
74	5216 2665	Registration Clutch Sleeve	1
75	5216 2635	Clutch Output Hub	1
76	5216 2664	Clutch Spring	1
77	5940 1075	Gear - 30T	1
78	5940 1132	Pulse Generator Disk	1
79	5940 1135	Bracket - Pulse Generator Sensor	1
80	5940 1072	Gear - 20T	3
81	5304 1639	Bushing - 8mm	1
82	5420 3675	Gear - Lubricant Brush	1
83	5447 4279	Spring - Hot Roller Stripper	1
84	5940 1078	Clutch Pawl	1
85	5940 5315	Feed-in Solenoid	1
86	5940 5300	Feed-in Motor	1
87	5940 1085	Feed Roller Shaft	1
88	5940 1071	Gear - 16T	2
89	5216 4198	Stepped Screw - Guide Plate	10
90	5875 2088	Shoulder Screw - M4	2
91	5940 1238	Cover Mylar - Original Table	1
92	5940 5230	Grounding Wire	1
93	5940 1055	Rear Plate - Original Feed	1
95	5940 1226	Decal - DF Removal	1
96	5940 1188	Exit Motor Bracket	1
97	5940 1197	Rubber Cushion	2
99	5940 1179	Grounding Plate	1
*	5940 8708	Installation Procedure - Multi-language	1

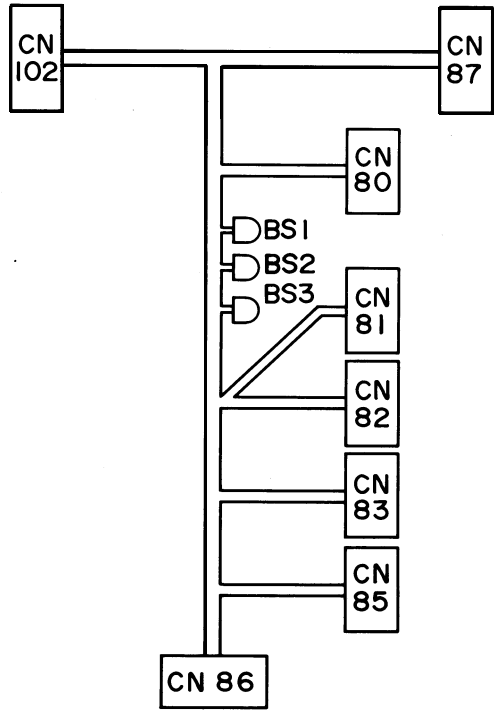
Index No.	Parts No.	Description	Q' ty Per Ass'y
101	0720 0025E	Retaining Ring - M2.5	2
102	0313 0050W	Philips Pan Head Screw - M3 x 5	9
103	0314 0100W	Philips Pan Head Screw - M4 x 10	4,
104	0314 0120W	Philips Pan Head Screw - M4 x 12	1
105	0323 0050W	Philips Sunken Head Screw - M3 x 5	6
106	0413 0062W	Tapping Screw - M3 x 6	1
107	0720 0030E	Retaining Ring - M3	6
108	0720 0040E	Retaining Ring - M4	19
110	0720 0060E	Retaining Ring - M6	10
111	0805 3145	Ball Bearing - 6 x 12 x 4 mm	1
112	0574 0050E	Hexagon Headless Set Screw - M4 x 5	1
113	0314 0060E	Philips Pan Head Screw - M4 x 6	2
114	0632 0200G	Pin - M2 x 20	1
115	0413 0082W	Tapping Screw - M3 x 8	2
116	0353 0060F	Philips Truss Head Screw - M3 x 6	1
117	0314 0080M	Philips Pan Head Screw - M4 x 8	1
118	1106 0289	Bushing - SR-5N-1	1


IC101
KP-45V-0
TP102 LED101
LED 105
LED102 LED103 LED104
X-TAL101
8749 8049
IC 104 (+5V) RAY104
TD62601P
C109 C110 C111 C112 C113
RAY 105
RAY 107
TP 103 (+24)
CN102
CN101
C101
C102
C103
C104
C105
C106
C107
C114
R109
R110
IC102
TD62304P
DPS101 OPEN
RAY103
RAY106
D104
Q103
Q104
R105
R107
R108
D103
D101
R106
D102
IC103
RAY101
RAY102
TP101 (GND)
R102
R103
Q101 Q102
CN 103
CN105 CN104

2. DF MAIN BOARD

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*	-	5940 5105	DF Main Board	1
1	IC101	5940 5130	IC -8749	1
2	IC102	1407 1348	IC - TD62304P	1
3	IC103	1408 0408	IC - PST518A	1
4	IC104	1407 1850	IC -TD62601P	1
5	Q101,102	1400 0100	Transistor - 2SA683	2
6	Q103,104	1401 0234	Transistor - 2SD686	2
7	RAY101	1601 7352	Resistor Array - 4.7K OHM	1
8	RAY103,104	1601 7374	Resistor Array - 4.7K OHM	2
9	RAY102, 106, 107	1601 7396	Resistor Array - 4.7K OHM	3
10	RAY105	1601 7371	Resistor Array - 1.5K OHM	1
11	R101	1611 4105	Resistor - 1M OHM 1/4T ±5%	1
12	R103,109	1611 4102	Resistor - 1K OHM 1/4T ±5%	2
13	R105	1611 4103	Resistor - 10K OHM 1/4T ±5%	1
14	R106	1611 5330	Resistor - 33 OHM 1/2T ±5%	1
15	R107,108	1611 5102	Resistor - 1K OHM 1/2T	2
16	C101,102,107, 109-114	1606 0689	Capacitor - 0.01µF 50V	9
17	C103,104	1606 0576	Capacitor - 20PF 50V	2
18	C105	1604 1382	Capacitor - 10µF 50V	1
19	C106,108	1604 1381	Capacitor - 4.7µF 50V	2
20	LED101-105	1403 0308	LED - TLR-102A	5
21	DPS101	1204 0758	DIP Switch	1
22	D101-104	1401 0832	Diode - DSA1A1	4
23	TP101-103	1101 0328	Connector Pin Contact	3
24	XTAL101	1503 0113	Oscillator - 6.00MHz	1
25	CN101	1103 1729	Connector - 7P	1
26	CN102	1103 1733	Connector - 11P	1
27	CN104	1103 1726	Connector - 4P	1
28	CN105	1103 1724	Connector - 2P	1

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly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3. MAIN HARNESS

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		1100 1327	Contact	11
2	CN80,82,87	1102 1089	Connector - 3P	3
		1100 1089	Socket - MATE-N-LOCK	9
3	CN81,83,86	1102 1910	Connector - 2P	3
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RICOH

RICOH FT2010/M100

PARTS CATALOG

1st edition Dec. 1986

RICOH COMPANY, LTD.

PARTS CATALOG

INTRODUCTION

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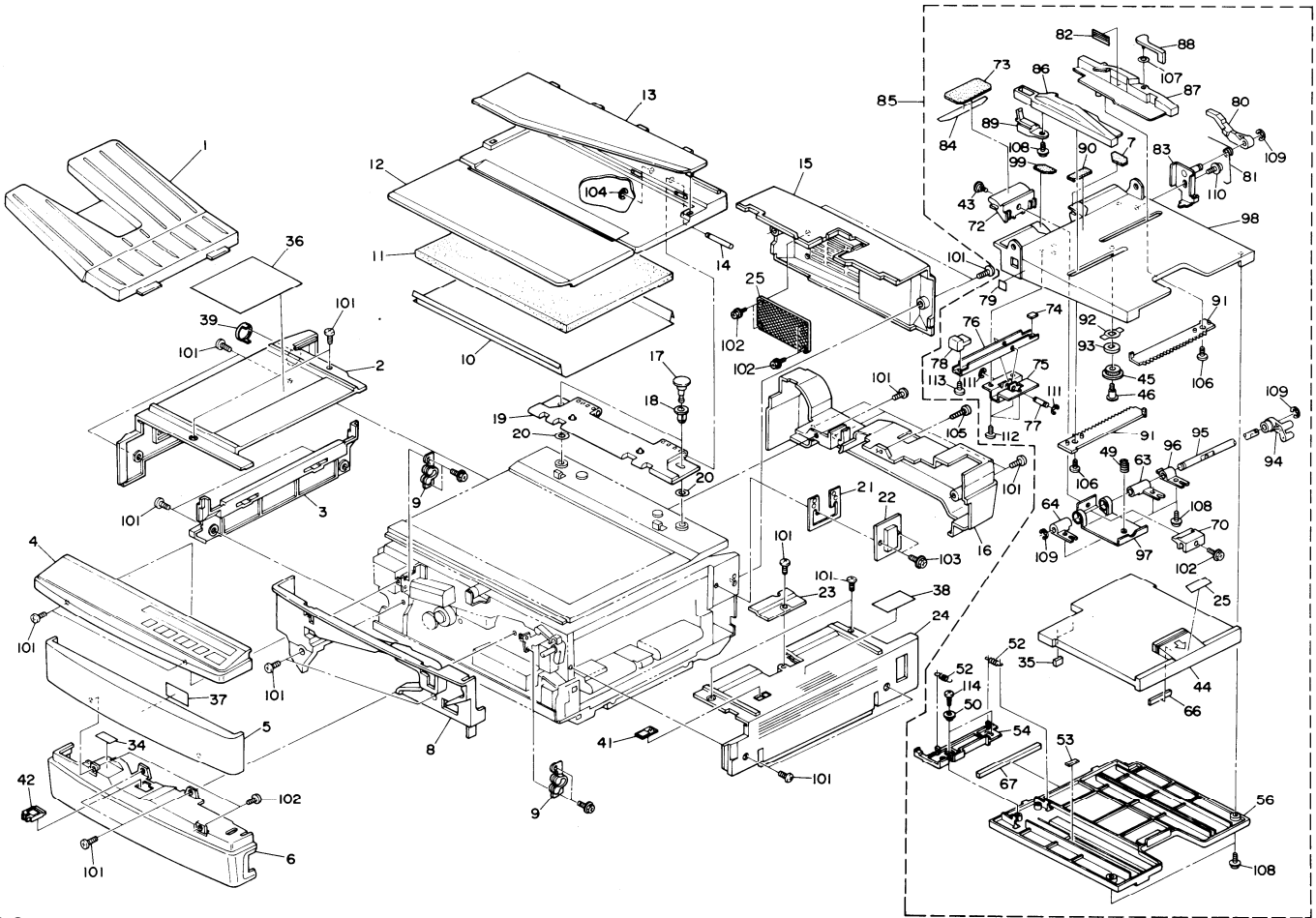
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1. EXTERIOR

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2	A005 1260	Upper Left Covr - 220/240V, ROC	1
	A005 1317	Upper Left Cover - USA	1
3	A005 1286	Lower Left Cover - 220/240V, ROC	1
	A005 1330	Lower Left Cover - USA	1
4	A005 5612	Operation Panel Ass'y - 220/240V,ROC	1
	A005 5512	Operation Panel Ass'y - USA	1
5	A005 1251	Upper Front Cover - 220/240V, ROC	1
	A005 1311	Upper Front Cover - USA	1
6	A005 1270	Lower Front Cover - 220/240V	1
	A005 1322	Lower Front" Cover - USA	1
7	A005 2658	Right Side Pad - Paper Tray	1
8	5216 1271	Inner Cover	1
9	5409 1238	Rotary Catch	2
10	5216 1367	Platen Cover Sheet	1
11	5216 1366	Platen Cover Pad	1
12	A005 1361	Platen Cover	1
13	A005 1365	Origianal Holder	1
14	5216 1374	Hinge Shaft - Platen Cover	1
15	A005 1255	Upper Rear Cover - ROC	1
	A005 1313	Upper Rear Cover - USA	1
	A005 1455	Upper Rear Cover - 220/240V	1
16	A005 1281	Lower Rear Cover - 220/240V, ROC	1
	A005 1327	Lower Rear Cover - USA	1
17	5216 1373	Ratch - Plunger	2
18	521 61372	Ratch - Grommet	2
19	5216 1371	Platen Cover Hinge	1
20	5203 1359	Platen Cover Washer	2
21	A005 1515	Plate - Key Counter - 220/240V, ROC	1
	5420 1515	Plate - Key Counter - 115V	1
22	A005 1303	Key Counter Cover	1
23	A005 1269	Exposure Sensor Cover	1
24	A005 1265	Upper Right Cover - 220/240V, ROC	1
	A005 1320	Upper Right Cover - USA	1
25	A005 4887	Half Letter Decal - USA	1

Index No.	Parts No.	Description	Q'ty Per Assembly
26	5220 1457	Cover Meshes - 220V/240V	1
34	5216 1279	Misfeed Removal Decal	1
35	AA02 0001	Drawer Tray Magnet	2
36	A005 4867	Instruction Decal 1 - USA	1
	A005 4873	Instruction Decal 1 - 220/240V, ROC	1
	A005 4874	French Instruction Decal 1 - 220/240V	1
	A005 4875	German Instruction Decal 1 - 220/240V	1
	A005 4876	Italian Instruction Decal 1 - 220/240V	1
	A005 4877	Spanish Instruction Decal 1 - 220/240V	1
37	AO05 4880	Instruction Decal 2	1
38	5216 4882	Bushiness Card Decal	1
	5216 4883	Bushiness Card Decal - Multilanguage	1
39	A005 1262	Sorter Harness Cap	1
41	AO05 1267	Toner Color Panel	1
42	5216 4975	Cleaner - Fiber Optics/Corona Wire	1
43	5447 2769	Stepped Screw	1
44	A005 2737	Drawer Tray - 115V	1
	A005 2739	Drawer Tray - 220/240V	1
45	5203 2675	Paper Tray Pinion	1
46	5203 2679	Pinion Tightening screw - M4 x 5	1
49	AA06 3010	Pad Spring	1
50	5216 2830	Friction Pad Spacer	1
52	AA06 0024	Lever Spring - Paper Length	2
53	AA02 0003	Slider Lever Magnet	1
54	5220 2629	Lever - Paper Length Detection	1
56	AO05 2731	Lower Cover - Paper Tray	1
63	AA08 0007	Right Bushing - Friction Pad Bracket	1
64	AA08 0008	Left Bushing - Friction Pad Bracket	1
66	AA02 0006	Drawer Tray Magnet	1
67	AA02 0004	Paper Tray Magnet	1
70	5220 2632	Center Fence - Paper Tray	1
72	5220 2661	Friction Pad Holder	1
73	5220 2638	Friction Pad	1
74	5220 2693	Cusion - Pressur Release Lever	1
75	5220 2691	Bracket - Friction Pressure Release	1

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76	5220 2692	Lever - Friction Pressure Release	1
77	5220 2690	Shaft - Friction Pressure Release	1
78	A005 2696	OHP Transparency Lever	1
79	A005 2699	Decal - OHP transparency Lever	1
80	A005 2702	Center Fence Lever	1
81	5220 2701	Spring - Center Fence Lever	1
82	5203 2694	Load Indicator Decal	1
83	5220 2704	Bracket - Center Fence Lever	1
84	5220 2636	Friction Mylar	1
85	A005 2672	Paper Tray Ass'y - 220/240V	1
	A005 2673	Paper Tray Ass'y - USA	1
	A005 2674	Paper Tray Ass'y - ROC	1
86	A005 2647	Left Fence - Paper Tray	1
87	A005 2650	Right Fence - Paper Tray	1
88	5203 7610	Right Fence - Side Guide	1
89	5220 2648	Arm - Paper Size Detection	1
90	5201 2858	Friction Pad	1
91	5216 2753	Manual Feed Guide Rack	2
92	5203 2678	Paper Tray Spring	1
93	5203 2677	Friction Disc	1
94	5220 2703	Center Fence Arm	1
95	AA14 0032	Center Fence Shaft	1
96	AA08 0006	Fence Bushing	1
97	5220 2639	Friction Pad Lever	1
98	A005 2717	Paper Tray Table - USA	1
	A005 2718	Paper Tray Table - ROC	1
	A005 2719	Paper Tray Table - 220/240V	1
99	A005 2640	Side Pad - Paper Tray	1
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	A005 8603	M100 Operating Instructions - Italian	1
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	A005 8606	FT2010 Operating Instructions	1
	A005 8615	Installation Procedure - Multilanguage	1

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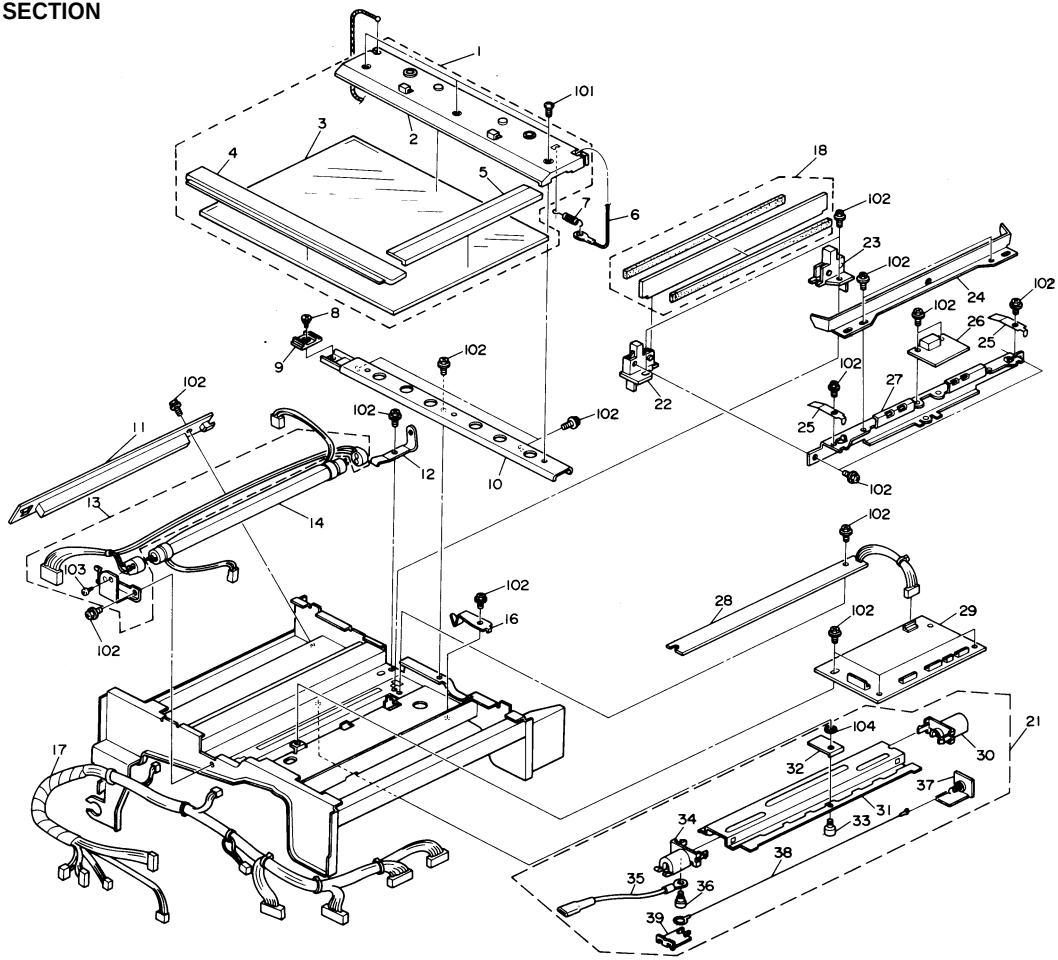
101	0353 0060F	Philips Pan Head Screw - M3 x 6	22
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	5
103	0443 0080W	Hexagon Head Tapping Screw - M3 x 8	2
104	0720 0025E	Retaining Ring - M2.5	1
105	0413 0100F	Philips Pan Head Screw - M3 x 10	1
106	0802 5019	Tapping Round Head Screw - M4 x 10	2
107	0807 2084	Washer 4.2 x 8 x 0.1mm	1
108	0965 4006W	Tapping Screw - M4 x 6	6
109	0720 0040E	Retaining Ring - M4	3
110	0443 0082W	Hexagon Head Tapping Screw - M3 x 8	1
111	0720 0030E	Retaining Ring - M3	2
112	0444 0082W	Hexagon Head Tapping Screw - M4 x 8	3
113	0802 5018	Tapping Screw - M4 x 6	1
114	0802 5089	Tapping Screw - M3 x 8	2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1	A005 1907	Exposure Glass Ass'y - USA	1
	A005 1908	Exposure Glass Ass'y - 220/240V	1
	A005 1909	Exposure Glass Ass'y - ROC	1
2	A005 1925	Slider Cover	1
3	5216 1929	Exposure Glass	1
4	AC04 1026	Front Original Scale - A4, A3 - ROC	1
	AC04 1028	Front Original Scale - 11, "17" - USA	1
	AC04 1030	Front Original Scale - A4, A3 - 220/240V	1
5	AC04 1029	Right Original Scale - 11, "17" - USA	1
	AC04 1031	Right Original Scale - A4, A3 - 220/240V	1
	AC04 1032	Right Original Scale - A4, A3 - ROC	1
6	5216 1912	Slider Drive Cable	1
7	5216 1913	Tightener Spring	1
8	5447 2768	Stepped Screw - M3	1
9	5216 1920	Slider Dumper	1
10	5216 1918	Slider Rail	1
11	5216 5250	Quenching Lamp	1
12	5216 1657	Leaf Spring - F.L. Hold	1
13	5216 5207	Flourescent Lamp Socket	1
14	A005 5556	Fluorescent Lamp - 115V	1
	A005 5656	Fluorescent Lamp - 220/240V	1
16	5216 2422	Leaf Spring - Master Earth	1
17	A005 5302	Main Harness	1
18	5216 1651	Fiber Optics	1
21	5216 2051	Charge Corona Ass'y	1
22	5216 1658	Front Holder - Fiber Optics	1
23	5216 1659	Rear Holder - Fiber Optics	1
24	5216 1661	Exposure Reflector	1
25	5216 1668	Leaf Spring - Fiber Optics	2
26	5216 5120	Exposure Sensor	1
27	5216 1655	Fiber Optics Bracket	1
28	5216 5255	Erase Lamp Unit	1
29	A005 5102	Main Board	1
30	5203 2058	Front End Block - Charge	1
31	5216 2055	Charge Corona Casing	1

Index No.	Parts No.	Description	Q'ty Per Assembly
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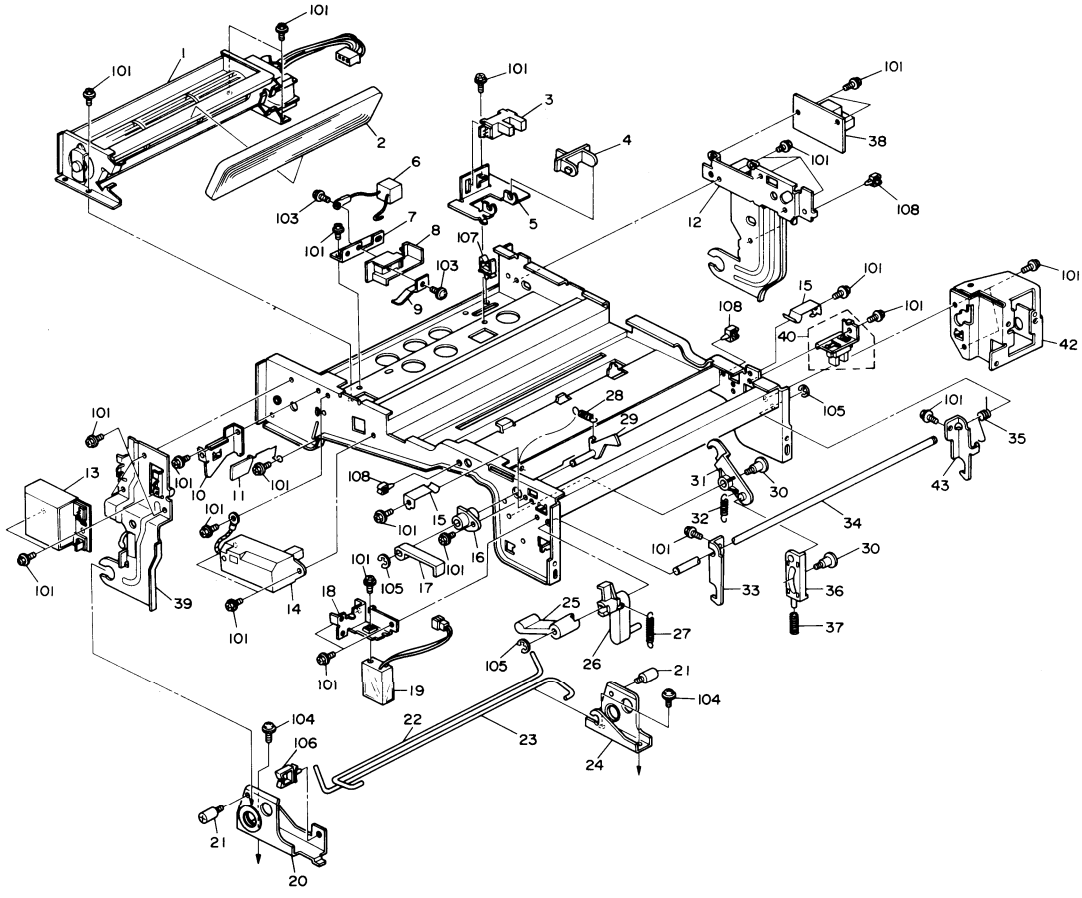
33	5214 2080	Thumb Screw - M4 x 5	1
34	5203 2057	Rear End Block - Charge	1
35	5216 5325	High Voltage Supply Cord - Charge	1
36	5203 2060	Corona Wire Screw - M3 x 4	1
37	5203 2059	Corona Wire Hook	1
38	5216 9001	Corona Wire - 10 pcs/Set	1
39	5203 2061	Rear End Cover - Charge	1
101	0353 0060F	Philips Pan Head Bind Screw - M3 x 6	1
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	19
103	0312 5060W	Philips Pan Head Screw - m2.5 x 6	1
104	0720 0030E	Retaining Ring - M3	1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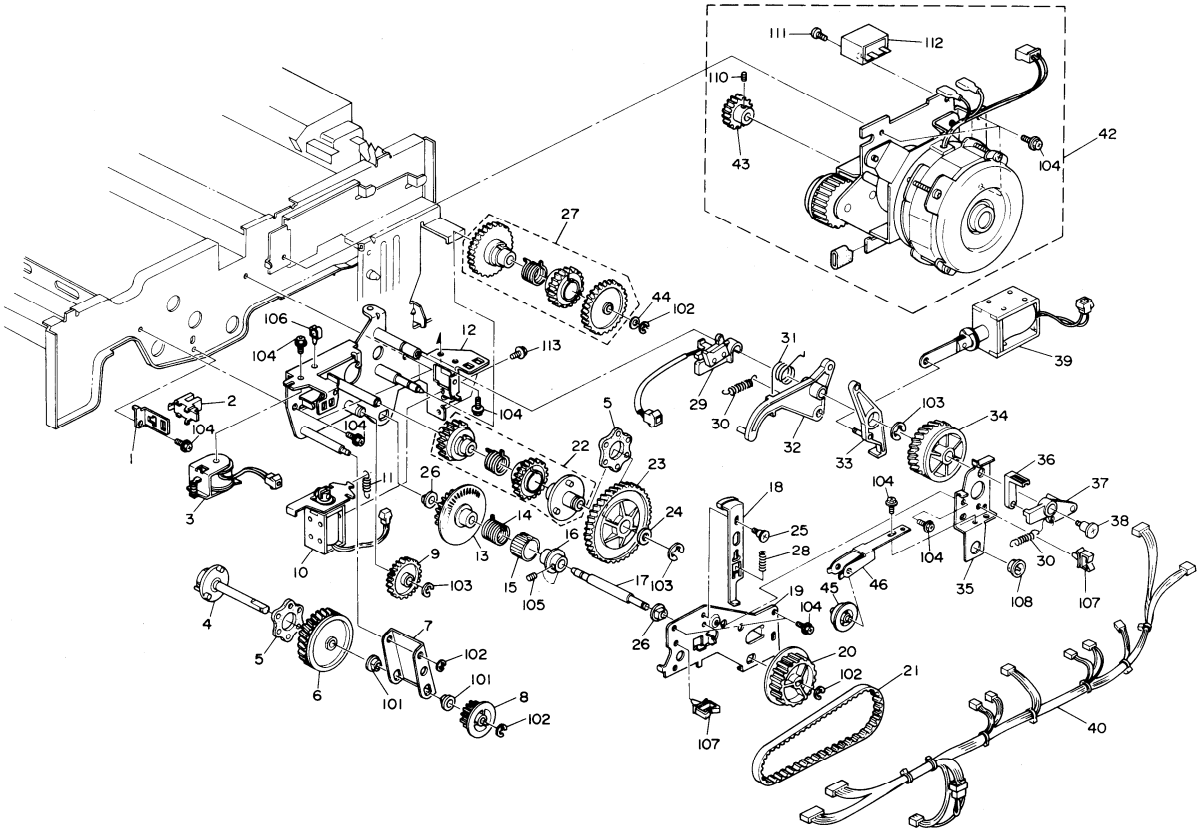
	A005 5610	Cooling Fan Motor - 220V/50Hz	1
2	5216 1077	Ozone Filter	1
3	5216 5245	Photointerruptor - IL-G-3P-S3T2-E	1
4	5216 2441	Shielding Plate - T.O.F.	1
5	A005 5857	Photointerruptor Bracket	1
6	5214 5202	Varistor - 820V	1
7	5216 2405	Varistor Bracket	1
8	5203 2403	Varistor Holder	1
9	5216 2404	Leaf Spring - Varistor	1
10	5216 5114	Left Bracket - Operation Panel	1
11	5216 1072	Release hook - Master Unit	1
12	5216 1119	Upper Hinge Bracket - Rear	1
13	5216 5216	Fluorescent Lamp Stabilizer	1
14	5216 5201	Power Pack - Charge	1
15	5216 1073	Left Sprint	2
16	5216 1093	Slider Actuator Bushing	1
17	5216 1097	Release Lever Stopper	1
18	5216 5116	Right Bracket - Operation Panel	1
19	5216 5224	Total Couter	1
20	5216 1112	Lower Hinge Bracket - Front	1
21	5203 1125	Stopper Pin - Top Unit	2
22	5216 1122	Rear Torsion Spring	1
23	5216 1121	Front Torsion Spring	1
24	5216 1117	Lower Hinge Bracket - Rear	1
25	5216 1091	Release Lever - Top Unit	1
26	5216 1098	Lock Release Arm	1
27	5216 1100	Release Lever Spring	1
28	5216 1096	Slider Actuator Spring	1
29	5216 1094	Slider Actuator	1
30	5203 2679	Pinion Tightening Screw - M4 x 5	2
31	5216 2412	Pressure Arm	1
32	5216 2414	Pressure Release Spring	1
33	5216 1089	Front Lock Pawl	1
34	5216 1088	Lock Pawl Shaft	1
35	5216 1092	Lock Pawl Spring	1
36	5216 2410	Pressure Arm Lever	1
37	5216 2413	Pressure Arm Spring	1
38	A005 5416	Relay Board	1
39	5216 1115	Upper Hinge Bracket - Front	1
40	5216 3170	Toner End Sensor Ass'y	1
42	A005 1302	Key Counter Bracket	1
43	5216 1090	Rear Lock Pawl	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	31
103	0965 3006W	Tapping Screw with Fait Washer - M3 x 6	2
104	0964 4008W	Tapping Screw with Flat Washer - M4 x 8	3
105	0720 0040E	Retaining Ring - M4	3
106	1105 0197	Wire Saddle	1
107	1105 0196	Harness Clamp	3
108	1105 0199	clamp	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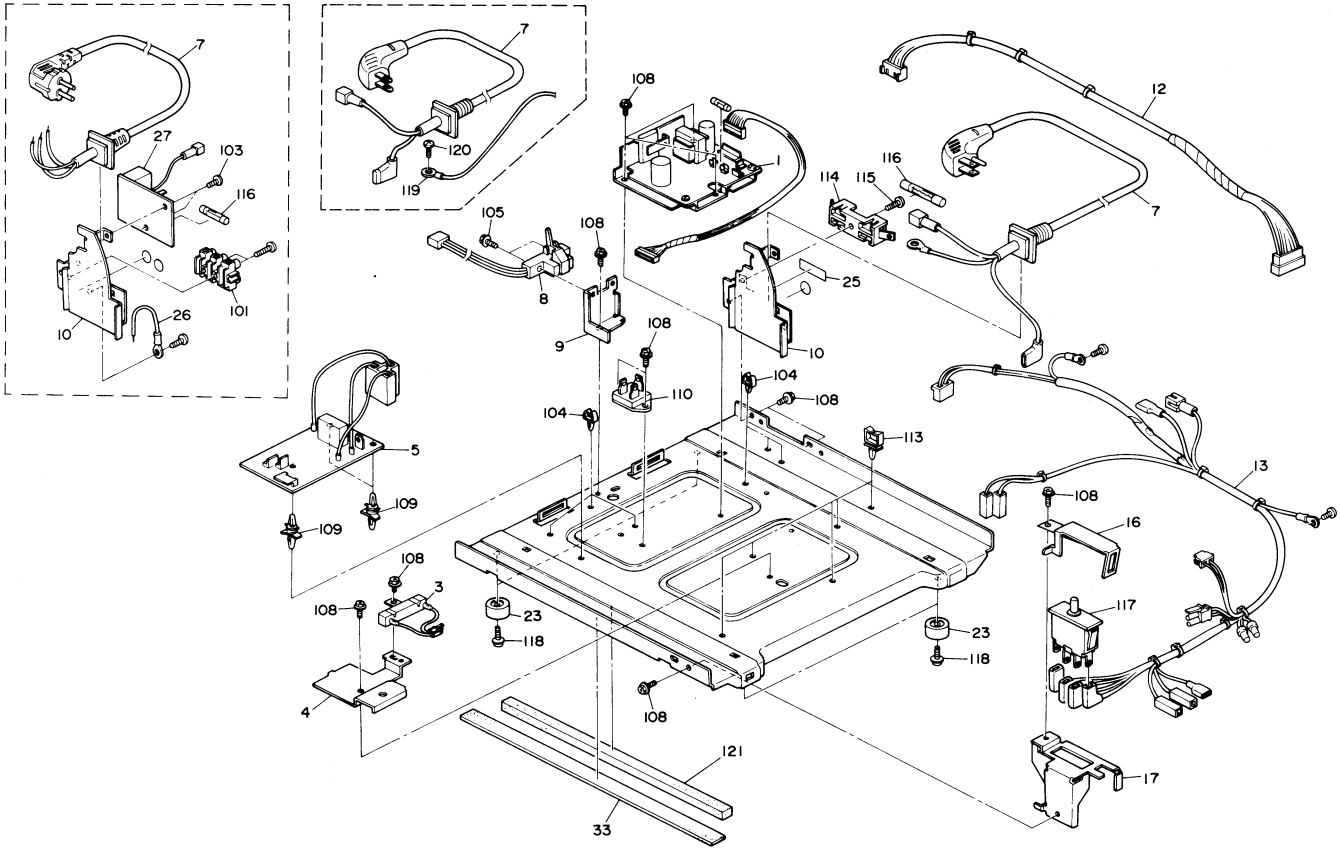
Index No.	Parts No.	Description	Q'ty Per Assembly
1	5216 1876	Photointerruptor Bracket	1
2	5216 5245	Photointerruptor - IL-G3P-S3T2-E	1
3	5216 5278	Short Return Solenoid	1
4	5216 2284	master Drive Shaft	1
5	5203 1831	Rubber Dumper	2
6	5216 2287	Gear - 48T	1
7	5216 2267	Drive Arm - Master Unit	1
8	5216 1171	Drive Pulley - 14T	1
9	5203 1853	Gear - 30T	1
10	5216 1180	Master Unit Solenoid - DC24V	1
11	5216 1174	Spring - Master Unit Solenoid	1
12	5216 1811	Clutch Base Plate	1
13	5216 1166	Gear - 30T	1
14	5053 0465	Spring Clutch	1
15	5413 1175	Ratchet Sleeve - Paper Feed	1
16	5446 4774	Clutch - Drum	1
17	5216 1165	Drive Shaft - Master Unit	1
18	5216 1870	Brake Arm	1
19	5216 1862	Slider Clutch Bracket	1
20	5216 1170	Drive Pulley - 21T	1
21	5216 1172	Timing Belt - 120XL	1
22	5216 1822	Reverse Clutch	1
23	5216 1828	Bevel Gear - 53T (Return)	1
24	5203 1870	Flat Washer - M8	1
25	5447 2768	Stepped Screw - M3	1
26	5053 0447	Bushing - 6x10x6mm	2
27	5216 1821	Forward Clutch	1
28	5216 1872	Brake Spring	1
29	A005 5240	Microswitch - Home Position	1
30	5216 1840	Slider Lock Spring	2
31	5216 1841	Clutch Pawl Spring	1
32	5216 1838	Return Clutch Pawl	1
33	5216 1837	Forward Clutch Pawl	1
34	5216 1844	Pinion - 36T	1
35	5216 1866	Drive Wire Bracket	1

Index No.	Parts No.	Description	Q'ty Per Assembly
36	5216 1858	Slider Lock Lever	1
37	5216 1856	Slider Release Lever	1
38	5216 1859	Stepped Screw - Slider Lock	1
39	5216 1842	Slider Solenoid - DC24V	1
40	A005 5301	Rear Unit Harness	1
42	5216 5506	Main Motor Ass'y - 115V/60HZ	1
	5216 5606	Main Motor Ass'y - 220V/50Hz	1
43	5216 5860	Output Gear - 50Hz	1
	5216 5861	Output Gear - 60Hz	1
44	5203 1869	Thrust Washer - 6 x 12 x 1.5mm	1
45	5216 1176	Belt Tension Pulley	1
46	5216 1177	Holder - Belt Tension Pulley	1
101	5053 0447	Bushing - 6 x 10 x 6mm	2
102	0720 0040E	Retaining Ring - M4	4
103	0720 0060E	Retaining Ring - M6	3
104	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
105	0574 0050W	Hexagon Headless Set Screw - M4 x 5	2
106	1105 0199	clamp	1
107	1105 0197	Wire Saddle	1
108	1106 0458	Bushing - 9.9mm	1
110	0574 0040W	Hexagon Headless Set Screw - M4 x 4	1
111	0314 0080B	Philips Pan Head Screw - M4 x 8	1
112	1606 1524	Capacitor - 8μF 220V	1
	1606 1525	Capacitor - 5μF 250V	1
113	0313 0050W	Philips Pan Head Screw - M3 x 5	1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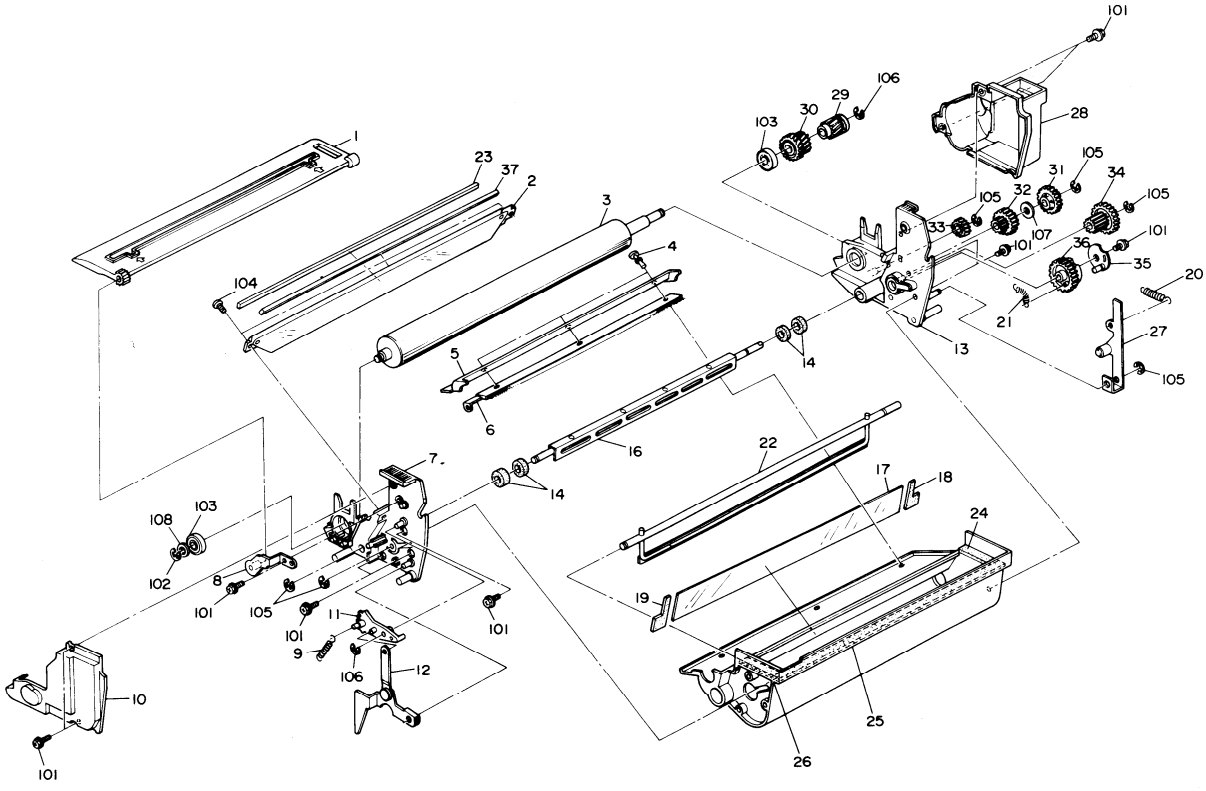
Index No.	Parts No.	Description	Q'ty Per Assembly
1	AZ22 0002	DC Power Supply Board - 115V	1
	AZ22 0003	DC Power Supply Board - 220/240V	1
3	5203 5535	Ceramic Resistor - 115V/5.2K OHM	1
	5203 5635	Ceramic Resistor - 240V/23K OHM	1
4	5216 2695	Bracket - Anticondensation Heater	1
5	5216 5445	Fusing Power Board Ass'y - 115V	1
	5216 5645	Fusing Power Board Ass'y - 220V	1
7	5216 5501	Power Supply Cord - 115V	1
	2801 0041	Power Supply Cord - 220/240V	1
	5216 5401	Power Supply Cord - ROC	1
8	5216 5236	Exit Sensor	1
9	5216 4179	Exit Sensor Bracket	1
10	A005 5850	Power Supply Cord Bracket	1
12	A005 5303	Lower Unit Harness	1
13	A005 5311	AC Harness	1
16	5216 5806	Safety Switch Lever	1
17	5216 5805	Safety Switch Bracket	1
23	5216 1186	Rubber Foot	4
25	5448 4973	Decal - English - 115V	1
26	5216 5675	Grounding - Wire 220/240V	1
27	A005 5642	Noise Filter Board - 220/240V	1
33	A005 1193	Grip - Sheet	1

Index No.	Parts No.	Description	Q'ty Per Assembly
101	1101 0359	Terminal - 3P	1
103	0313 0160W	Philips Pan Head Screw - M3 x 16	2
104	1105 0199	clamp	6
105	0313 0100W	Philips Pan Head Screw - m3 x 10	2
108	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
109	1102 0895	Nylon Stud	3
110	1405 0153	Triac - TG16C40 - 115V	1
	1405 0154	Triac - TG16C60 - 220/240V	1
113	1105 0197	Wire Saddle	5
114	1104 0322	Fuse Holder - 220/240V	1
115	0313 0080W	Philips Pan Head Screw - M3 x 8	1
116	1107 0485	Fuse - 15A, 125V	1
	1107 0486	Fuse - 8X, 250V	1
117	1204 1373	Push Switch	1
118	0951 3008W	Philips Screw with Flat Washer - M3 x 6	2
119	1802 2802	Grounding Wire - RIC (ROC)	1
120	0314 0080M	Philips Pan Head Screw - M4 x 8 (ROC)	1
121	2701 0514	Seal - Bottom Plate	1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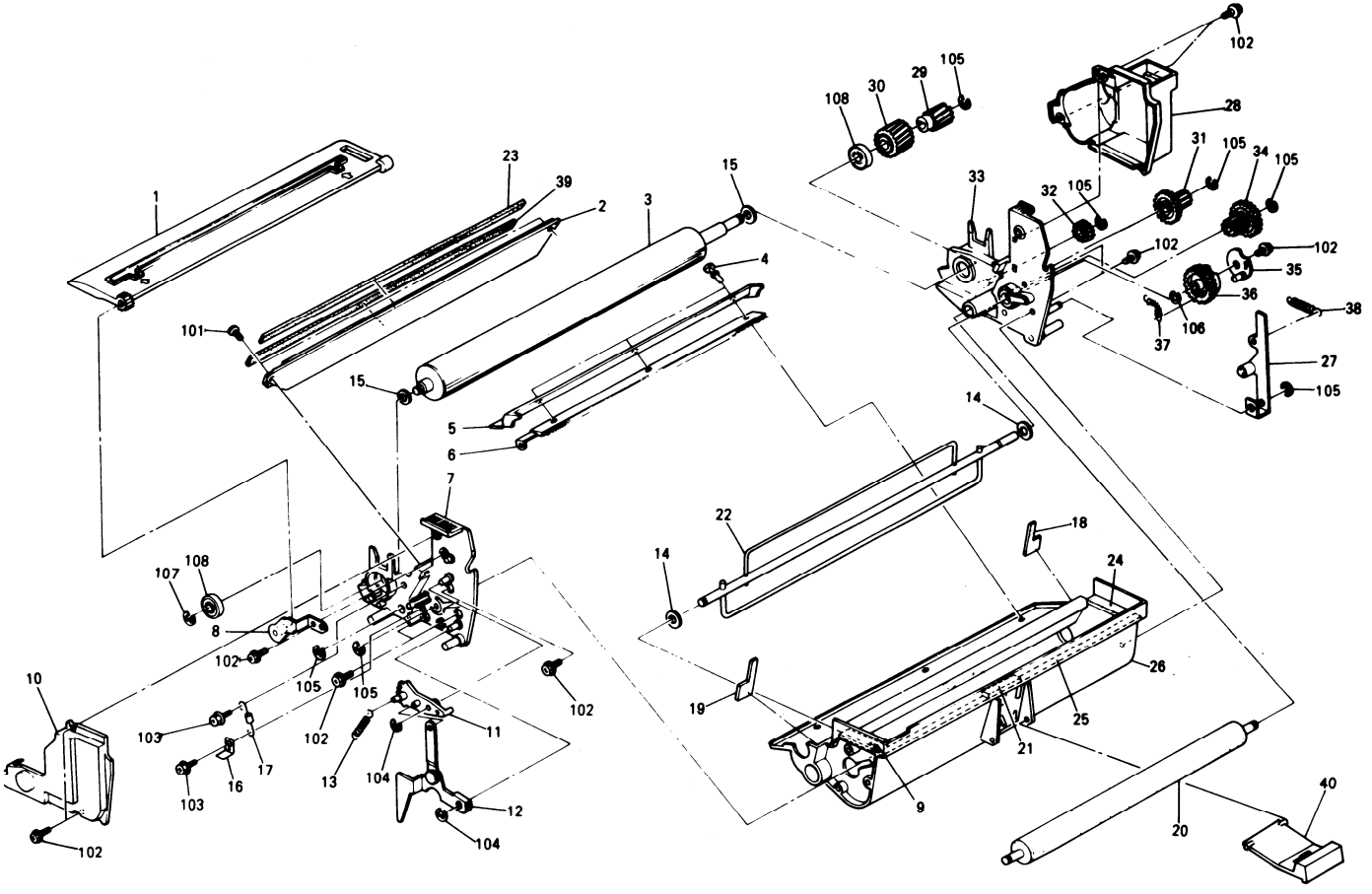
Index No.	Parts No.	Description	Q'ty Per Assembly
*	5216 3000	Development Unit - Black	1
1	5216 3110	Development Roller cover	1
2	5216 3080	Toner Metering Blade	1
3	5216 3180	Black Development	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5216 3051	Front Side Plate - Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5216 3113	Roller Cover Spring	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3060	Rear Side Plate - Development	1
14	5216 3095	Seal - Toner Supply Bar	4
16	5216 3098	Toner Supply Bar	1
17	5216 3087	Toner Supply Mylar	1
18	5216 3067	Rear Side Seal	0
19	5216 3066	Front Side Seal	1
20	5216 3133	Drive Spring - Toner End	1
21	5216 3105	Toner End Spring	1
22	5216 3090	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front Cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
26	5927 3085	Front Toner Hopper Seal - Color	1
27	5216 3130	Toner End Actuator	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5214 3100	Gear - 24T	1
31	5214 3102	Gear - 20T	1
32	5214 3101	Gear - 12T	1
33	5214 3103	Gear - 18T	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5216 3083	Seal - OBM	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	11
102	0720 0060E	Retaining ring - M6	1
103	0805 3162	Ball Bearing - 10 x 19 x 7mm	1
104	0313 0060W	Philips Pan Head Screw - M3 x 6	2
105	0720 0040E	Retaining Ring - M4	6
106	0720 0030E	Retaining Ring - M3	2
107	0701 0050E	Flat Washer - M5	1
108	0807 5057	Washer - 1mm	1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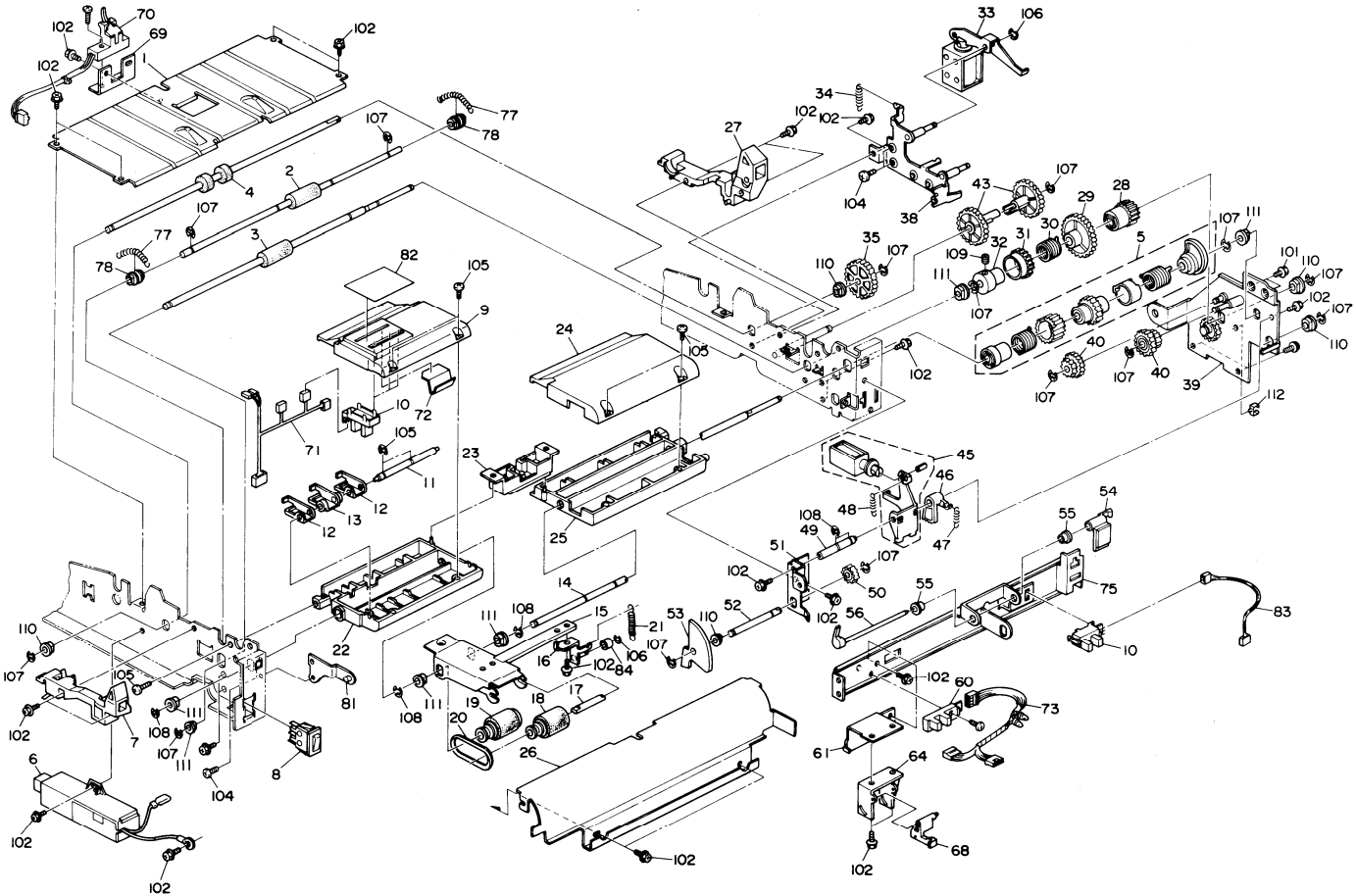
Index No.	Parts No.	Description	Q'ty Per Assembly
1	5216 3110	Development Roller Cover	1
2	5927 3091	Toner Metering Blade - Color	1
3	5927 3130	Color Development Roller	1
4	5203 3105	Nylon Rivet	3
5	5216 3140	Bias Brush Cover	1
6	5216 3141	Development Bias Brush	1
7	5927 3061	Front Side Plate - Color Development	1
8	5203 3145	Front Cover Bracket - Development	1
9	5927 3085	Front Toner Hopper Seal - Color	1
10	5927 3150	Front Development Cover	1
11	5214 3115	Sector Gear - 60T	1
12	5216 3120	Cover Arm	1
13	5216 3113	Roller Cover Spring	1
14	5921 3103	Seal - Toner Mixing Bar	2
15	5921 3084	Seal - Toner Suppl Bar	2
16	5927 3067	Grounding Plate	1
17	5927 3140	Varistor - 180V ±10%	1
18	5216 3069	Rear Side Seal	1
19	5216 3068	Front Side Seal	1
20	5927 3114	Toner Supply Roller	1
21	5927 3088	Toner Hopper Seal - Upper	1
22	5927 3100	Toner Mixing Bar	1
23	5216 3078	Upper Seal - Front Cover	1
24	5216 3072	Toner Hopper Seal - Rear	1
25	5216 3073	Toner Hopper Seal - Side	1
27	5927 3120	Toner End Actuator - Color	1
28	5216 3151	Rear Development Cover	1
29	5216 3107	Gear - 15T	1
30	5921 3110	Gear - 20T	1
31	5921 3111	Gear - 16T	1
32	5214 3101	Gear - 12T	1
33	5927 3071	Rear Side Plate - Color Development	1
34	5203 3125	Coupled Gear - 14T/32T	1
35	5203 3130	Toner End Disk	1
36	5203 3126	Gear - 32T	1
37	5927 3105	Toner End Spring - Color	1
38	5216 3133	Drive Spring - Toner End	1
39	5216 3083	Seal - OBM	1
101	0313 0060W	Philips Pan Head Screw - M3 x 6	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	12
103	0443 0062W	Hexagon Head Tapping Screw - M3 x 6	2
104	0720 0030E	Retaining Ring - M3	3
105	0720 0040E	Retaining Ring - M4	5
106	0720 0050E	Retaining Ring - M5	1
107	0720 0060E	Retaining Ring - M6	1
108	0805 3162	Ball Bearing - 10 x 19 x 7mm	2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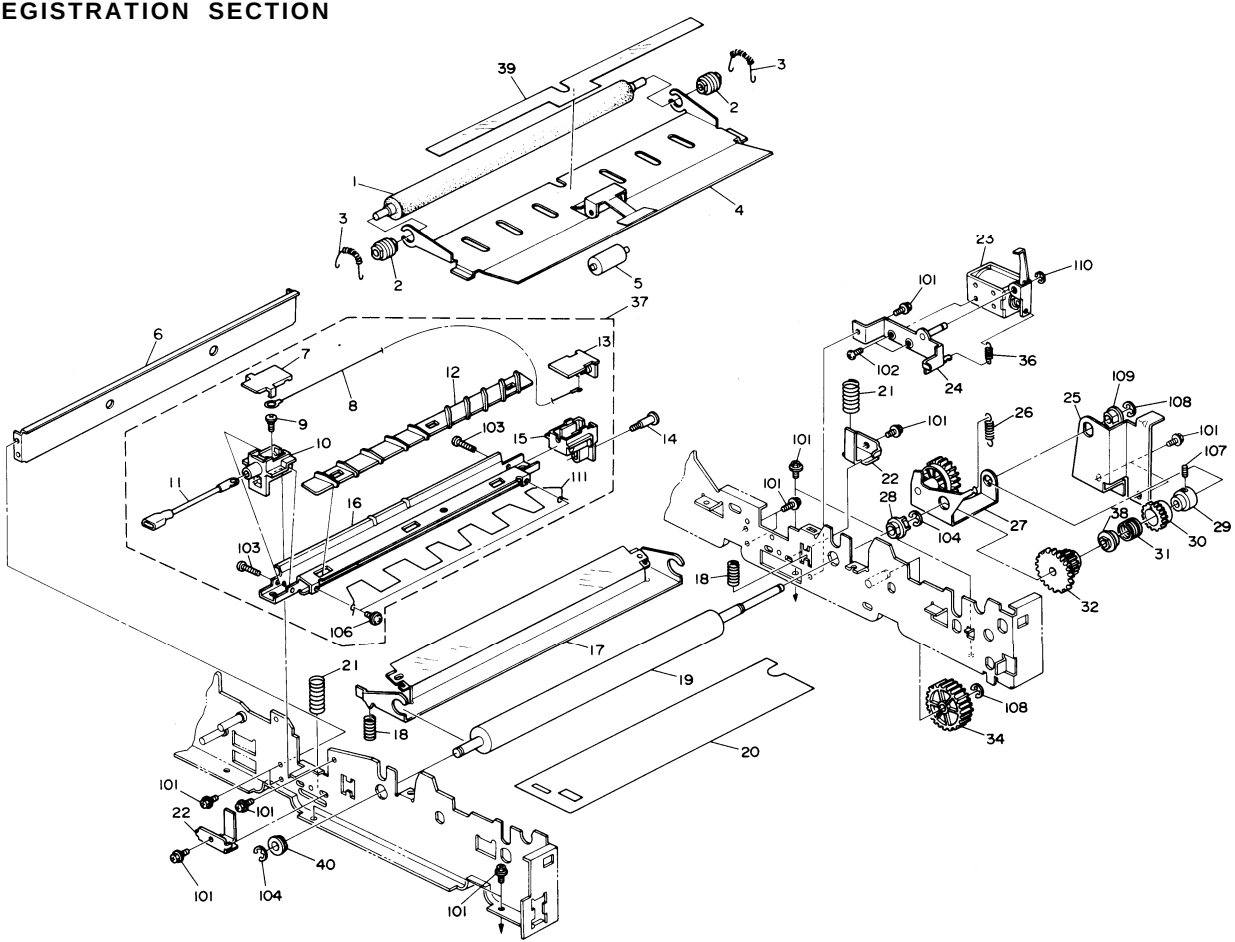
8. PAPER FEED SECTION

Index No.	Parts No.	Description	Q'ty Per Assembly
1	5216 2691	Lower Feed Guide	1
2	5216 2572	1st Relay Roller	1
3	5216 2571	1st Relay Roller - Lower	1
4	5216 2581	2nd Relay Roller - Lower	1
5	5220 2576	Tray Feed Clutch Ass'y	1
6	5216 5203	Power Pack - Transfer/Bias	1
7	5216 3160	Front Development Guide	1
8	1204 1386	Main Switch	1
9	5220 2571	Front Feed Guide Cover	1
10	AW02 0001	Photointerruptor	4
11	AA14 0031	Shaft - Paper Size Detection	1
12	5220 2567	Side Paper Size Feeler	2
13	5220 2568	Center Paper Size Feeler	1
14	AA14 0030	Paper Feed Shaft	1
15	5220 2557	Pick-up Roller Bracket	1
16	5220 2564	Lever - Pick-up Roller Bracket	1
17	AA14 5007	Pick-up Roller Bracket	1
18	5203 2591	Paper Pickpup Roller	1
19	5203 2582	Paper Tray Feed Roller	1
20	5203 2601	Drive Belt - Pick-up Roller	1
21	5220 2560	Spring - Pick-up Roller Bracket	1
22	5220 2553	Front Feed Guide	1
23	5220 2554	Center Feed Guide	1
24	5220 2572	Rear Feed Guide Cover	1
25	5220 2555	Rear Feed Guide	1
26	A005 2616	Paper Turn Guide	1
27	5216 3162	Rear Development Guide	1
28	5216 2658	Gear - 18T	1
29	5216 2657	Gear - 36T (Grip)	1
30	5216 2633	Clutch Spring	1
31	5216 2634	Feed Clutch Sleeve	1
32	5216 2635	Clutch Output Hub	1
33	5216 2744	1st Relay Solenoid	1
34	5216 2737	Registration Solenoid Spring	1
35	5216 2582	Gear - 32T	1

Index No.	Parts No.	Description	Q'ty Per Assembly
38	5216 2741	Bracket - Paper Feed Solenoid	1
39	A005 2580	Support Plate - Feed Drive	1
40	AB01 3039	Gear - 20T/26T	2
43	5216 2643	Idle Gear - 40T (B)	2
45	A005 2597	Tray Feed Solenoid	1
46	AB01 3040	Sector Gear - 6T	1
47	AA06 0019	Sector Gear Spring	1
48	AA06 0020	Spring - Tray Feed Solenoid	1
49	AA14 3013	Sector Gear Shaft	1
50	AB01 3041	Gear - 16T	1
51	5220 2710	Bracket - Tray Feed Solenoid	1
52	AA14 5008	Pick-up Roller Cam Shaft	1
53	5220 2601	Pick-up Roller Cam	1
54	5216 2717	Sensor Actuator	1
55	5443 2668	Bushing	2
56	5216 2715	Feeler Lever - Manual Feed	1
60	5205 5250	LED Sensor Type S	1
61	5220 2613	Bracket - Paper Length Detection	1
64	5220 2611	Feeler Bracket - Paper Length	1
68	A005 2612	Feeler - Paper Length Detection	1
69	5216 2693	Bracket - Paper Feed Sensor	1
70	5214 5235	Paper Feed Sensor	1
71	5220 5365	Paper Width Sensor Harness	1
72	5220 2575	Harness Clamp Plate	
73	A005 5367	Lower Harness - Paper Feed	1
75	5216 2712	Paper Feed Bracket	1
77	AA06 0021	Spring - 1st Relay Roller	2
78	5216 2573	Registration Roller Bushing	2
81	5220 2713	Paper Tray Bracket	1
82	5220 2574	Seal - Paper Width Sensor	1
83	A005 5334	Rear Harness - Paper Feed	1
84	5220 2562	Pick-up Roller Cam Follower	1

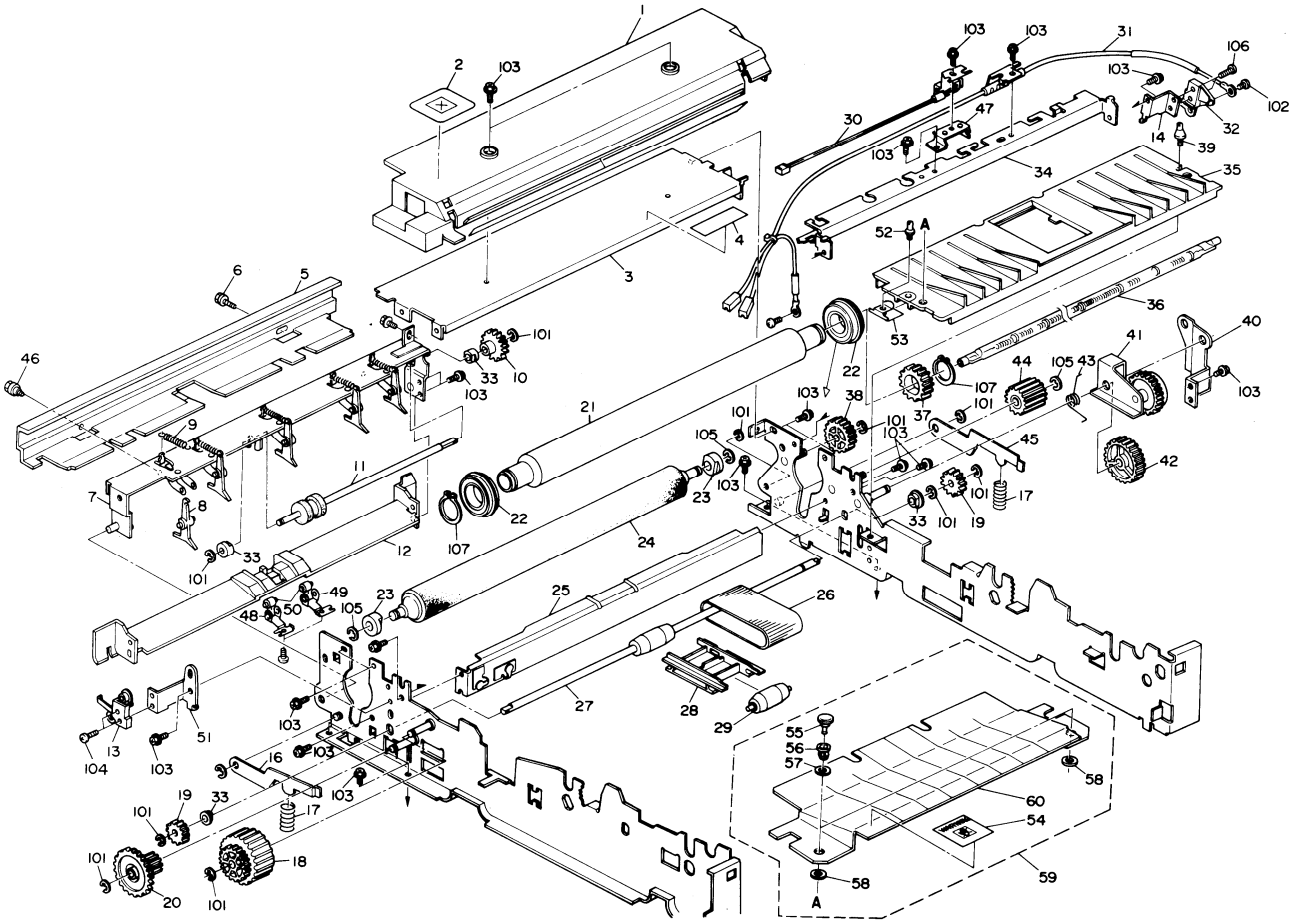
Index No.	Parts No.	Description	Q'ty Per Assembly
101	0313 0060W	Philips Pan Head Screw - M3 x6	2
102	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	22
104	0313 0050W	Philips Pan Head Screw - M3 x 5	3
105	0802 5089	Tapping Screw - M3 x 5	7
106	0720 0030E	Retaining Ring - M3	2
107	0720 0040E	Retaining Ring - M4	14
108	0720 0060E	Retaining Ring - M6	5
109	0574 0040E	Hexagon Headless Set Screw - M4 x 4	1
110	0805 3385	Bushing - 6mm	5
111	0805 3386	Bushing - 8mm	6
112	1105 0199	Clamp	1

9. REGISTRATION SECTION



Index No.	Parts No.	Description	Q'ty Per Assembly
1	5216 2592	Upper Registration Roller	1
2	5216 2573	Registration Roller Bushing	2
3	5216 2593	Registration Roller Spring	2
4	5216 2612	Upper Guide Plate - Registration	1
5	5216 2615	2nd Relay Roller - Upper	1
6	5216 1133	Base Plate Stay	1
7	5216 2104	Front End Cover - Transfer Corona	1
8	5216 9001	Corona Wire - 10 pcs/Set	1
9	5203 2060	Corona Wire Screw - M3 x 4	1
10	5216 2103	Front End Block - Transfer	1
11	5216 5320	High Voltage Supply Cord - Transfer	1
12	5216 2133	Transfer Guide Plate	1
13	5203 2108	Rear End Cover - Transfer Corona	1
14	5216 2113	Stepped Screw - Transfer	1
15	5216 2107	Rear End Block - Transfer	1
16	5216 2132	Transfer Corona Casing	1
17	5216 2121	Guide Plate - Transfer Entrance	1
18	5203 2133	Pressure Spring - Transfer Corona	2
19	5216 2591	Lower Registration Roller	1
20	5216 2124	Insulating Sheet	1
21	5216 2112	Pressure Spring	2
22	5216 2110	Pressure Spring Holder	2
23	5216 2731	Registration Solenoid	1
24	5216 2732	Registration Solenoid Bracket	1
25	A005 2681	Support Plate - Registration Roller	1
26	5216 2676	Spring - Engage Gear Bracket	1
27	5216 2679	Arm - Paper Feed Drive	1
28	5216 2678	Registration Roller Bushing - Rear	1
29	5216 2635	Clutch Output Hub	1
30	5216 2665	Registration Clutch Sleeve	1
31	5216 2664	Clutch Spring	1
32	A005 2662	Gear - 18T/36T	1
34	5216 2642	Idle Gear - 40T	1
36	5216 2737	Registration Solenoid Spring	1
37	5216 2130	Transfer Corona Ass'y	1

Index No.	Parts No.	Description	Q'ty Per Assembly
38	A005 2638	Clutch Input Hub	1
39	5216 2619	Mylar - Upper Guide Plate	1
40	5304 1639	Bushing - 8mm	1
101	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	14
102	0313 0050W	Philips Pan Head Screw - M3 x 5	2
103	0313 0220W	Philips Pan Head Screw - M3 x 22	2
104	0720 0060E	Retaining Ring - M6	2
106	0951 3008W	Philips Screw with Flat Washer - M3 x 8	2
107	0574 0040E	Hexagon Headless Set Screw - M4 x 4	1
108	0720 0040E	Retaining Ring - M4	2
109	0805 3385	Bushing - 6mm	1
110	0720 0030E	Retaining Ring - M3	1
111	0809 1013	Nylon Wire (50M/Roll)	1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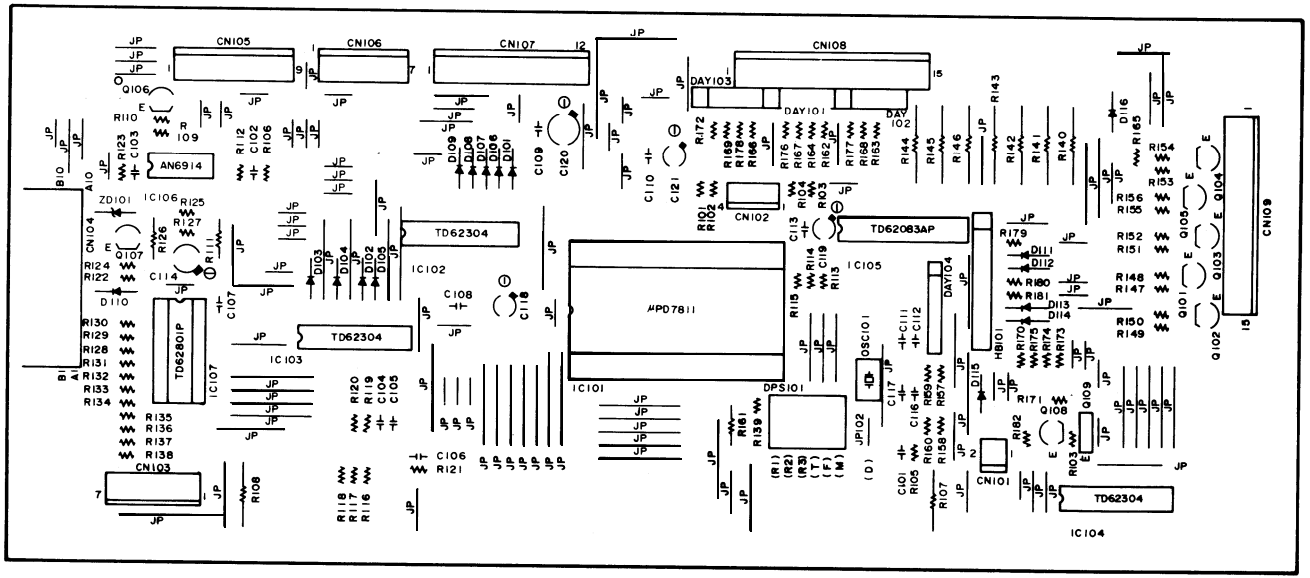
Index No.	Parts No.	Description	Q'ty Per Assembly
1	5216 4169	Fusing Cover - 115V	1
	5216 4170	Fusing Cover - 220/240V	1
2	5442 4421	Decal - Small - 115V	1
	5442 6126	Small Decal - High Temperature - 220/240V	1
3	5216 4127	Fusing Stay	1
4	5216 4145	Thermofuse Decal	1
5	A005 4195	Exit Cover	1
6	5216 4221	Shoulder Screw - M3	1
7	A005 4180	Side Plate - Paper Exit	1
8	5216 9002	Hot Roller Stripper - 5 pcs/Set	1
9	5203 4168	Stripper Spring .	5
10	5216 4205	Gear - 19T	1
11	5216 4202	Upper Exit Roller	1
12	A005 4197	Lower Guide Plate - Paper Exit	1
13	5216 4095	Front Heater Terminal	1
14	5216 4099	Rear Heater Bracket	1
16	5216 4085	Front Pressure Lever	1
17	5216 4090	Fusing Pressure Spring	2
18	5216 4133	Paper Reverse Knob	1
19	5216 3915	Gear - 18T	1
20	5216 4134	Idle Gear - 38T	1
21	5216 4106	Hot Roller	1
22	5216 4107	Ball Bearing - 37 x 20 x 9mm	2
23	5216 4118	Pressure Roller Bushing	2
24	5216 4110	Pressure Roller	1
25	5216 4155	Lower Guide Plate	1
26	5216 3914	Transport Belt	1
27	5216 3911	Driven Roller - Transport Belt	1
28	5216 3912	Transport Belt Holder	1
29	5214 3855	Inverted Roller - Transport Belt	1
30	5216 5258	Thermistor	1
31	5216 5425	Thermofuse - 169°C	1
32	5216 4100	Rear Heater Terminal	1
33	5216 4207	Bushing - 6mm	4
34	5216 4143	Thermofuse Stay	1

Index No.	Parts No.	Description	Q'ty Per Assembly
35	5216 3904	Lower Transport Guide Plate	1
36	5442 5722	Heater - 115V, 960W	1
	5442 5752	Heater - 240V/960W	1
37	5214 4108	Gear - 30T	1
38	5216 4150	Gear - 24T	1
39	5216 3553	Stud Screw - M3	1
40	5216 4075	Bracket - Transfer Belt Gear	1
41	5216 4068	Fusing Drive Arm	1
42	5216 4073	Gear - 34t	1
43	5216 4072	Fusing Arm Spring	1
44	5216 4074	Gear - 20T	1
45	5216 4086	Rear Pressure Lever	1
46	5216 4220	Screw - M3	1
47	5216 4144	Thermistor Bracket	1
48	5216 4213	Front Guide Roller	1
49	5216 4215	Rear Guide Roller	1
50	5214 4235	Lower Exit Roller	2
51	5216 4103	Front Heater Bracket	1
52	5216 3552	Stud Screw - M3	1
53	5216 3570	Grounding Plate	1
54	5442 6126	Small Decal - High Temperature	1
55	5216 1373	Ratch - Plunger	2
56	5216 1372	Ratch - Grommet	2
57	5216 3564	Washer - 7.6 x 12 x 12mm	2
58	5203 1359	Platen Cover Washer	2
59	5216 3559	Upper Transport Guide Ass'y	1
60	5216 3563	Upper Transport Guide	1
101	0720 0040E	Retaining Ring - M4	11
102	0950 3005M	Philips Screw with Flat Washer - M3 x 5	2
103	0443 0060W	Hexagon Head Tapping Screw - M3 x 6	20
104	0313 0100W	Philips Pan Head Screw - M3 x 10	4
105	0720 0060E	Retaining Ring - M6	3
106	0313 0050W	Philips Pan Head Screw - M3 x 5	2
107	0725 0200E	Retaining Ring - M20	2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TD62801P
μPD7811
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OSC101
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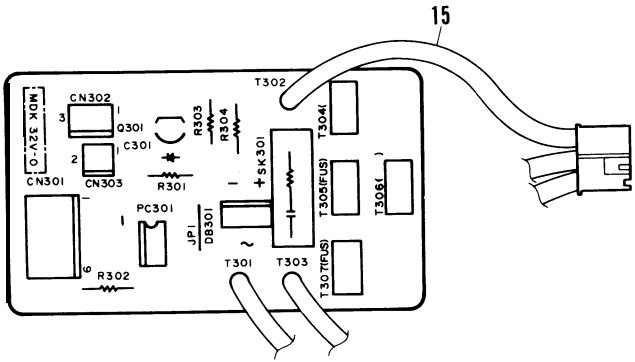
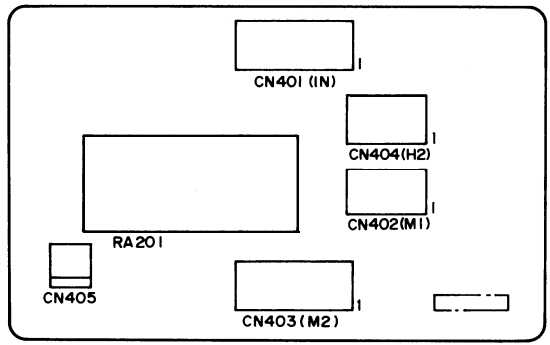
Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
		A005 5102	Main Board Ass'y	1
1	IC101	A005 5104	CPU - Main Board	1
2	ICI02,103 IC104	1407 1348	Ic - TD62304P	3
3	IC105	1401 0332	Transistor - TD62083AP	1
4	IC106	1408 0258	Ic - AN6914	1
5	Q101 - 106	1400 0347	Transistor - 2S81010	6
6	Q107,108	1400 0208	Transistor - 2SC945	2
7	D101 - 116	1401 0815	Diode - 1S1588	16
8	ZD101	1402 0524	Zener Diode - 4.6V, 400MW	1
9	OSC101	1503 0070	Ceramic Oscillator - 10MHz	1
10	DPS101	1204 1387	DIP-Switch	1
11	DAY1O1 - 103	1401 0807	Diode Array	3
12	DAY104	1401 0787	Diode Array - UPA54H	1
13	HB101	1502 0911	Surge Killer - O.O1μF	1
14	C101 - 113	1606 1336	Capacitor - 1000pF 50V	13
15	C116 - 117	1606 1184	Capacitor - 27μF 50V	2
16	C119,121	1604 1354	Capacitor - 100μF 10V	2
17	C120	1604 1386	Capacitor - 100μF 50V	1
18	C118	1604 1357	Capacitor - 470μF 10V	1
19	C114	1604 1378	Capacitor - 1μF 50V	1
20	CN101	1103 0778	Connecotor - 2P	1
21	CN102	1103 1770	Wafer - 4P	1
22	CN103,106	1103 1773	Pin Header - 7P	2
23	CN105	1103 1775	Pin Header - 9P	1
24	CN107	1103 1778	Pin Header - 12P	1
25	CN108	1103 1781	Pin Header - 15P (Brown)	1
26	CN109	1103 1795	Pin Header - 15P (Red)	1
27	R140 - 146	1601 1810	Resistor - 380 OHM ±5%	7
28	R108	1622 1001	Resistor - 1K OHM ±1%	1
29	R107	1622 4702	Resistor - 47.2K OHM 1/4W ±1%	1
30	R111	1611 4102	Resistor - 1K OHM 1/4T ±5%	1
31	R126	1611 4103	Resistor - 10K OHM 1/4T ±5%	1
32	R127,148,150	1611 4102V	Resistor - 1K OHM 1/4W ±5%	6
33	152,154,156 R112	1611 4132V	Resistor - 1.3K OHM 1/4T ±5%	1
34	R103,104,147 149,151,153, 155	1611 4222V	Resistor - 2.2K OHM 1/4V ±5%	7
35	R158,160	1611 4332V	Resistor - 3.3K OHM 1/4W ±5%	2
36	R113 -118 R123,183,184 R128 - 130	1611 4472V	Resistor - 4.7K OHM 1/4W ±5%	12
37	R109,124	1611 4103V	Resistor - 10K OHM 1/4T ±5%	2
38	R162 - 181	1611 4123V	Resistor - 12K OHM 1/4W ±5%	20
39	R105,106,110 R119 - 121, R157,159,182	1611 4223V	Resistor - 22K OHM 1/4W ±5%	9
40	R122	1611 4393V	Resistor - 39K OHM 1/4W ±5%	1
41	R101,102,125 R139	1611 4105V	Resistor - 1.0M OHM 1/4V ±5%	4
42	JP	1002 0307	Jumper Wire	
43	R161	1611 4472	Resistor - 4.7K OHM 1/4T ±5%	1
44	Q109	1400 0352	Transistor - 2SD1198A	1

FUSING POWER SUPPLY BOARD



RELAY BOARD



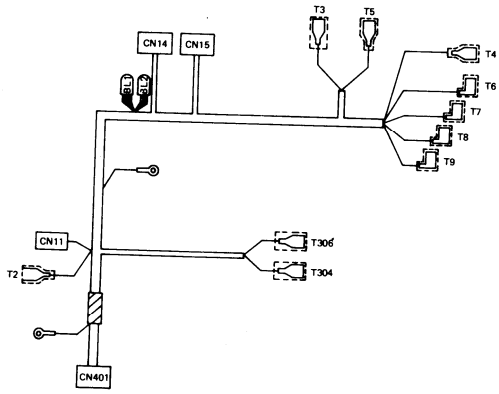
FUSING POWER SUPPLY BOARD

Index No.	Sketch No.	Parts No	Description	Q'ty Per Assembly
*	-	5216 5445	Fusing Power Board Ass'y - 115V	1
	-	5216 5645	Fusing Power Board Ass'y - 220V	1
1	PC301	14050127	Thyristor - TLP541G (115V)	1
		14050151	Photothyristor - TLP545J (220V)	1
2	Q301	14000305	Transistor - 2SC1815	1
3	DB301	14050130	Rectifier - 400V, 10A IG4B42 (115V)	1
		1405 0152	Rectifier - 1J4B42 (220V)	1
4	C301	1606 0689	Capacitor - O.O1µF 50V	1
5	R301	1611 4273	Resistor - 27K OHM 1/4T ±5%	1
6	R302	1611 5222	Resistor - 2.2K OHM 1/2W	1
7	R303	1611 4563	Resistor - 56K OHM 1/4T ±5%	1
8	R304	1611 5224	Resistor - 220K OHM 1/2W	1
9	JP1	1002 0307	Jumper Wire	1
10	SK301	1602 0940	Noise Killer - 0.1µF, 10OHM (115V)	1
		1602 0920	Noise Killer - 0.1µF, 120 OHM (220V)	1
11	CN301	1103 1814	Pin Header - 6P	1
12	CN302	1103 1769	Connector - 3P	1
13	CN303	1103 1768	Connector - 2P	1
14	T304 - 307	1100 0657	Fastening Tab	4
15		5216 5447	Fusing Power Harness	1

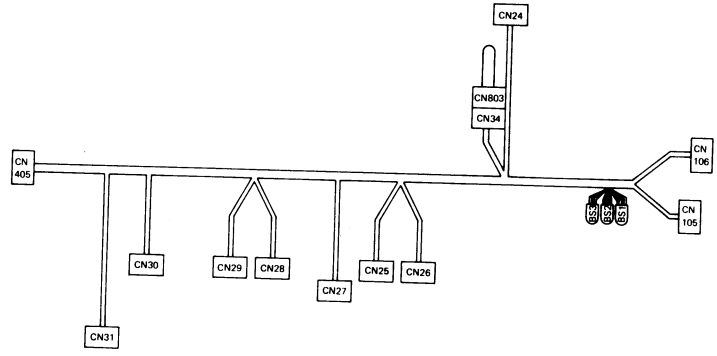
RELAY BOARD

Index No.	Sketch No.	Parts No	Description	Q'ty Per Assembly
*		A005 5416	Relay Board	
20	CN401	1102 0484	Terminal - 3P	1
21	CN402	1103 1446	Wafer - 2P	1
22	CN403	1102 2387	Wafer - 3P	1
23	CN404	1103 1445	Wafer - 2P	1
24	CN405	1103 1768	Connector - 2P	1
25	RA401	1208 1041	Power Relay - DC24V	1

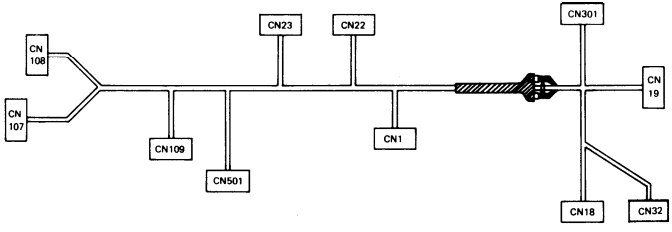
AC HARNESS



REAR UNIT HARNESS



MAIN HARNESS



13. HARNESS

AC HARNESS

Index No.	Sketch No.	Parts No	Description	Q'ty Per Assembly
*	-	A005 5311	4C Harness	1
1	T5	1102 0717	Closed Terminal	1
		1100 0270	Fastening Receptacle	1
2	T3	1102 1402	Receptacle Housing - 1P	1
		1100 1171	Fastening Receptacle	1
3	T4,304,306	1102 1404	Receptacle Housing	3
		1100 1171	Fastening Receptacle	3
4	T 6 - 9	1102 1842	Insulating Sleeve	4
		1100 0301	Fastening Receptacle	4
5	T2	1102 1842	Insulating Sleeve	1
		1100 0301	Fastening Receptacle	1
6	CN14	1102 2626	Connector - 2P	1
		1100 1409	Socket - MATE-N-LOCK	2
7	CN15	1102 1515	Connector - 2P	1
		1100 1241	Socket - MATE-N-LOCK	2
8	CN11	1102 1006	Plug - MATE-N-LOCK	1
		1100 1043	Pin - MATE-N-LOCK	1
9	CN401	1102 2385	Connector - 2P	1
		1100 1247	Terminal	2

MAIN HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		A005 5302	Main Harness	1
20	CN107	1102 1992	Socket Housing - 12P	1
		1100 1329	Socket Contact	12
21	CN108	1102 1995	Socket Housing - 15P	1
		1100 1329	Socket Contact	14
22	CN109	1102 2009	Socket Housing - 15P	1
		1100 1329	Socket Contact	15
23	CN301	1102 1986	Socket Housing - 6P	1
		1100 1329	Socket Contact	6
24	CN501	1102 2110	Pin Housing - 15P	1
		1100 1204	Socket - MATE-N-LOCK	15
25	CN18	1102 1985	Socket Housing - 5P	1
		1100 1329	Socket Contact	4
26	CN1	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
27	CN22	1102 1983	Socket Housing - 3P	1
		1100 1329	Socket Contact	3
28	CN23	1102 1982	Socket Housing - 2P	1
		1100 1329	Socket Contact	2
29	CN19	1102 1992	Socket Housing - 10P	1
		1100 1329	Socket Contact	12
30	CN32	1102 2000	Socket Housing - 6P	1
		1100 1329	Socket Contact	6

REAR UNIT HARNESS

Index No.	Sketch No.	Parts No.	Description	Q'ty Per Assembly
*		A005 5301	Rear Unit Harness	1
40	CN105	1102 1989	Socket Husing - 9P	1
		1100 1329	Socket Contact	9
41	CN106	1102 1987	Pin Housing - MATE-N-LOCK-6P	1
		1100 1329	Socket Contact	7
42	CN24,27,31	1102 1983	Socket Husing - 3P	3
		1100 1329	Socket Contact	9
43	CN26,29,30,	1102 1982	Socket Housing - 2P	4
	405	1100 1329	Socket Contact	8
44	CN25,28	1102 1996	Socket Housing - 2P	2
		1100 1329	Socket Contact	4
45	CN803	5408 5160A	Short Connector	1
46	BS1 - 3	1100 0878	Connection Cap	3
47	CN34	1102 0185	Connector - 4P	1
		1100 0844	Socket - MATE-N-LOCK	4

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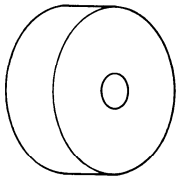

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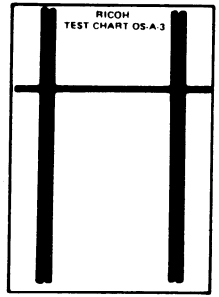

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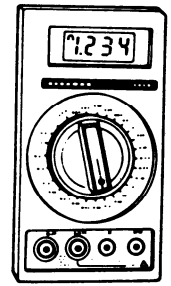

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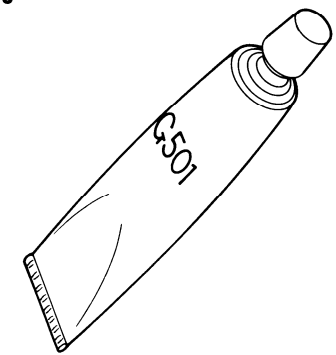

14. SPECIAL TOOL

December 1.'86

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1	5216 9003	Positioning Ring	1
2	5420 9502	Test Chart OS-A3	1
3	5420 9507	Digital Multimeter	1
4	5420 9508	Deluxe Test Lead	1
5	5447 9078	Grease - Mobil Temp 78	1
6	5203 9502	Grease - Shin-etsu Silicon G-501	1

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